The National Locksmith

June 1988

The National Locksmith

Manufacturing Homecenters

Managing
The Forces
Of Change

Marketing Strategies Management

Finance

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The National Locksmith

June 1988



On The Cover

This month's cover illustrates the fact that the forces of change are acting upon the locksmith. If you are prepared to meet these changes head on, you can learn to use them to your advantage. (Cover by Dan Sharp.)

Click on the article you wish to read

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Commentary

Random Notes For A Change

The summer has finally arrived here in Chicago. The danger of frost is finally past and those of us unwilling to gamble with the weather have just recently planted our gardens. Are you unwilling to gamble with your professional life? If so, why not come out to Las Vegas this summer! I know that sounds kind of strange because usually one must be a gambler to enjoy Vegas. This year, however, even if you don't pull the slots or roll the dice you will find plenty of excitement in Las Vegas.

From June 26th to July 3rd of this year the ALOA convention will be offering a full slate of classes, seminars and exhibits for locksmiths. I guarantee that this is one proposition you cannot lose. Everyone who attends the ALOA convention will be a winner! Make sure to stop by and visit us at Booths 643 and 645.

We will be displaying many of our technical books at our booth this year. Prominent among them will be a large selection of safe books. New releases include the MANIPULATION book written by Bob Sieveking. This is a complete course of study on the subject.

Also, Dave Mc Omie has authored a couple of new books. First is volume two of SAFE OPENING. This book gives complete opening details and explicit photos of 200 new safes, with over 400 photographs. If you don't already have volume one, this is a good time to pick up both volumes at a special price. Also, Dave has authored an introduction to a book called *Diary of A Safeman*. This book is the private safe diary kept by C.L. Corey in the early 1930's. This expert safeman recorded all his safe jobs from that time, and he took dozens of excellent photos which we have reproduced for you. Back then, burglars (yeggs) were blowing safes with nitroglycerine (soup). It's fun and educational to relive those days.

In this issue, we are asking you to think for a bit on some of the forces of change confronting the locksmith at this time. There are new trends in retailing, wholesaling and manufacturing that are affecting your business even as we speak. The more knowledgeable about these changes you are, the better able you will be to turn them to your advantage.

Change is one of the few factors that can be guaranteed in life. If you don't believe me, just ask the dinosaurs. Well, it is quite clear that locksmithing will endure as a profession. Security is becoming more important for our society as time goes on. Yet businesses must always be ready to tackle new challenges and face new trends to succeed.

This month Sean De Forrest writes the first of a series of articles on changes facing the locksmith. As the series progresses, he will offer good advice on how to take these challenges on and make your business grow. Changes are inevitable, but the alert locksmith will see them as an opportunity.

Finally, I would like to alert you to something going on now in the industry. Several sources have informed me that a company calling itself J & S Associates in Boston is pushing an opening method for certain Medeco products. They are using a letter on stationery from this magazine, signed by me, to try and sell their method. They didn't even much care that my letter was to tell them that I was not interested in becoming involved with them or their method. So let me make this perfectly clear. I do not endorse this company or their method. Moreover, I have never suggested that anyone send them any money to purchase anything from them.

Special Note: If you have purchased our book on Interchangeable Cores, we have found a couple of errors in the book. Please send a self-addressed stamped envelope and a note requesting a copy of the corrections. All books now being shipped already contain the corrections.



Marc Holdberg Editor/Publisher

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your views. We do reserve the right to edit for clarity and lengths. Please address your comments, praise, or criticism to: Editor, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

Senior Locksmith Questions Changes

I am writing in response to Stewart Levine's letter in the April 1988 issue of The National Locksmith. I take issue with him that most people complaining can't pass the RL test and that it is an ego trip.

Passing the test is fine and I am sure that a lot of the younger men and woman in our trade will enjoy a lot of satisfaction from it, even if it doesn't help their ego. I am an older locksmith and regard myself as a professional. I specialize in certain areas and am not concerned with the police or garages opening cars. I open them when called but do not advertise such. I do what is best for my customers and me.

As far as licensing goes, there will not be a board of locksmiths set up to license locksmiths. It will always be politicians or their appointees that will do this kind of thing. It is unfortunate that this is the case but as an older citizen, I don't see any change. I don't think licensing will solve any of the problems.

I have competition in the respect that a locksmith has gone in on an account of mine for 8 years and cut the price by 30%. I still have the account and he is much bigger in business than I am.

I think that if each of us would try to take care of our accounts and build new business from them, we can survive. I do believe that each and every one of us should try to improve our skills no matter what our age is. I agree with Mr. Levine that change is probably in order but I think his views on some things do not answer the problem.

Harold Wager
Florida

Tradesman Disappointed With Locksmith Wages

Not long ago I received a letter from a young locksmith who did service work for a shop. He was asking a question that comes up every now and then, "Does it pay to get all the training and knowledge?" I read on and he told how much experience he had in the various phases of work and how many training classes he'd taken.

I thought a long time about what the man had said and then started to ask questions about how much workers were being paid in the craft. Several locksmiths said they earned \$5 per hour and some of the new persons were getting minimum wage and after several years work had never received any more. Veterans who had benefits from the government were paid nothing above what the benefits paid and several, after years of work, when their benefits ran out were axed and their apprenticeship stopped.

For a number of years, The Carpenter's union ran the locksmith apprenticeship program and the scale for persons starting apprenticeship was \$3.35 per hour; after the first year it raised and so on for a period of four years until the person completed apprenticeship and got a certificate. Then the scale went to \$7 per hour. But before any person is paid this amount, they get fired and a new apprentice was hired at minimum wage. One locksmith was an exception to this rule, he worked for The University of Cincinnati and his wage was raised with each year and after he completed apprenticeship his scale went to \$12 per hour.

About a year ago, I signed up a young veteran under The Veteran's Administration's benefit program, doing all the paper work and forms required but after several months this person quit locksmith work to avoid starving to death. I wrote a letter of explanation to both The Apprenticeship Bureau and The Veteran's Administration on this as is required.

This person received a job as a guard at the Federal Reserve Bank making many times the wage of a locksmith.

As far as paid employees go, the "Locksmith Profession" pays about as well as McDonalds, a professional dishwasher, or floor swabber.

Herman Teichman, Jr.

Police 'Compete' With Area Locksmiths

In my area (east end of Long Island) local police departments are well known for "helping out" when citizens lock their keys in a vehicle. In fact they handle on the average of five to seven lockouts a week! Those cars that can't be opened, eventually get opened by local locksmiths (myself and two or three others). Many times a call is given to us by the police or our phone numbers are given. Note: They will always refer to us for other emergencies such as lost keys, locked houses, etc.

I would like to praise those new car makers whose cars foil their Slim Jim! Unfortunately the odds are in the officers' favor because for every customer they refer they help a few others.

Shouldn't they at least not compete with us during regular business hours? John Steiner

hn Steiner New York

Clarification Offered On Ilco Unican Purchase

Editor's Note: As stated in our May issue, Ilco Unican has purchased Locksmith Ledger. In our report, we quoted a portion of Aaron Fish's letter to stockholders regarding the purchase. In the interest of clarity, we are reprinting the section of his letter from which we quoted.

Unican manufacturing and distribution facilities in Australia, Hong Kong, Italy, Switzerland and Venezuela, are well placed to expand distribution of

Continued on page 105

Enter the 1988 Technitips Contest

\$\$\$ Thousands and thousands in cash and prizes! \$\$\$

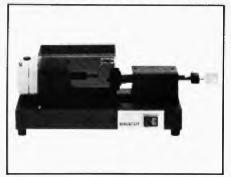
HPC Club



First Prize

Reproduces a wide range of dimple and milled keys. You'll be able to duplicate many high security keys for high profits.

Ilco KD94



Fourth Prize

Cuts the 1137 tubular key, brass or steel accurately and quickly. Features include large chuck to hold standard size key heads, easily adjustable.

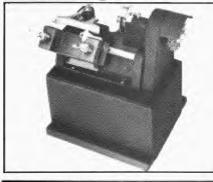
The Free Flo



Second Prize

Designed to cut Medeco® and Emhart® keys. Duplicates a Medeco® key very quickly and accurately. Will also cut regular cylinder keys. By Fulton Lock.

9150 Speedex



Fifth Prize

The Speedex has been transformed from the old stand-by to the machine for today's needs. Features double sided jaws. From HPC.

Saber Tooth



Third Prize

A fast semi-automatic duplicator featuring carbide cutter, full 1/3 hp motor, 2400 rpm. Working lamp and deburring brush are standard. From The Locksmith Store.

\$100.00 Cash



Sixth Prize

Everyone can use a few extra dollars! This prize will brighten your day...and fatten your wallet.

Contest Rules

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Steve Spiwak, Technitips' Editor, *The National Locksmith*, 698 Bonded Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will not be eligible! So get busy and send in your tips today! You may win cash, merchandise, or even one of several key machines! At the end of the year, we choose the winners of the above prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1987? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$20.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker, decal and patch. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$30.00 in Locksmith Bucksl Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal, patch and a Locksmith Cap. Plus, you may win one of the great prizes pictured above.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The l Locksmith, 698 Bonded Perkway Streemwood, IL 60107.

by Robert Sieveking

As I read through the Technitips this month, I asked myself. "What makes one tip better than the next?" If I were to evaluate the tips that I have seen over the past years, I think that I would have to say that the tips I found most helpful were those that did not destroy or deface the customer's property. The customer has the right to expect only the most professional service from any locksmith. If that means that a particular job takes a half hour to do right, then so be it. If a job is worth doing, it's worth doing, right.

In the Technitips column we share our discoveries and best ideas with other locksmiths for the benefit of all. If you find that a few, of the tips appear to be rather basic, read more carefully, you may find something new in an old tip. If you find an idea here that you like, use it. If you have a better method or a new idea, let me know, I'll pass it along to the trade.

"Though the apprentice learns his trade from the master, it is surprising how much the master can learn by watching the apprentice."

Congratulations to all those whose Technitips are printed this month.

Here's a tip from the Technitips Editor. The following are two addresses that you may want to add to your files, as they are a little hard to come by when you need them:

The first is for the Stanley Vidmar Company. Stanley Vidmar makes a line of high security tool cabinets, that are commonly used in factories to store high value carbide tool bits and measuring instruments. These high security locks are made in Switzerland (manufacturer not known), and are much like the Bell lock. The bitting is on the sides of the key (milled, requires a Club or Ten machine to duplicate, no keys are available to my knowledge) and the wafers have no springs. I have had great difficulty picking these little gems, and making a first key is a real nightmare.

Once the cabinet is opened, the code will be found stamped on the rear of the lock. A quick call to the factory will get you a key in about three days. It's a toll free call and the keys are about three dollars each. Don't blow one of these locks off if you are unable to pick it, they are not cheap. Bypass the lock at the rear of the cabinet by disconnecting the linkage through the inspection hole, near the top of the cabinet, at the rear, on the right hand side.

You can contact this company by writing: Stanley Vidmar, P.O. Box 1151, Allentown, PA 18105. To order, phone (800) 223-1567, or (800) 523-9462.

The second company that I have had occasion to find is Lista Systematic Storage. They too, make cabinets much like Vidmar. Their cabinets use a foreign pin tumbler lock with the code on the face of the lock. I was unable to cross the code, but did discover that the key, resembling a Yale 10½ or (Curtis) Y6 with the Eaton Head, could be substituted with a Taylor F81E blank. (Used on the older pin tumbler Waso ignition locks found in Triumph automobiles.) Shorten the blank to completely enter the lock. These locks impression about the same as a Yale file cabinet lock

These locks also use a plastic cam to lock and unlock the cabinets. If one should be broken, you'll need to order it from the manufacturer. Unfortunately there is no toll free number available, but the address and local phone number are as follows: Lista International Corp., Holliston, MA 01746, phone (617) 429-1350.



TRATTEC

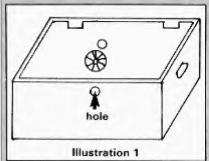
It's your reputation. Trust the original.

June's Best Tip

The other day I had a customer bring into my shop a Melink insulated box with a combination lock. He had lost the combination. The lock has a three number combination lock with a dial that is numbered from 1 to 50. The lock has a spring bolt that secures the door.

To open the box, I measured down 11/2" on the side of the box, directly in line with the center of the dial. I marked and drilled a very

small hole at this point (see illustration I) to allow a small piece of music wire to enter the box and



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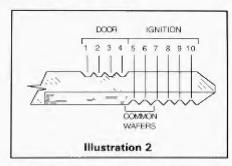
Click here for more information

push back the spring bolt, opening the box in less than ten minutes. The combination was read through the peek hole in the rear of the lock and the hole was repaired.

Larry Thompson Arkansas

Editor's Note: Use a drill that is the correct size to accept a drive screw. After the box is opened, use a drive screw to repair and conceal the hole. Use a number 48 drill (.076") for a number #2 drive screw, or a number 39 drill (.099") for a number #4 drive

In order to simplify cutting the Ford 10 wafer keys by code using depth keys, my tip is to make a special set of depth and space keys, cut for the door wafers on one side, and for the ignition wafers on the reverse side. Such a depth key set will allow the locksmith to cut the Ford 10 cut keys without the possibility of miscounting the spaces and wasting a blank, which is very easy to do with the 10 cut depth key sets. Note that illustration two shows a depth key with the ignition cuts on one side and door cuts on the other side.



As the ignition code is comprised of six cuts and door codes, the remaining four cuts, the depth keys should logically follow in the same sequence and pattern. Simply look up and cut the ignition code using one side of the depth keys, then use the opposite side of the depth keys to complete the key. This involves no counting, and no wasted blanks.

Milton Chanove Missouri

I recently had a service call from a home-owner who had tried to install a peep hole in a metal door. The drill had wandered, and the inside hole was

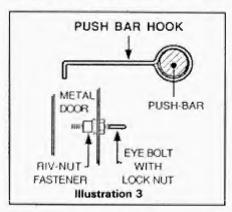
made closer to \%" than the required \\2" diameter. Even after going back to the hardware store to buy another peep hole with a larger front viewer, the back of the peep hole kept falling right through the hole.

My solution to the problem was to purchase a package of two solid brass 1½" diameter knob back-plates, commonly used on kitchen cabinets. Drill a ½" hole through the back-plate, using the existing hole as a pilot. Presto, you have a polished brass scar plate that looks as if it should come with every peep hole. The customer was pleased with the job and relieved at seeing the door repaired. Because these back-plates come in packages of two, you will be prepared if the same problem comes up again.

Gilbert Bochacz Maryland

My tips are for the emergency exit locks used in factories and schools. One factory that I do work for, has many of these pushbar-type locks.

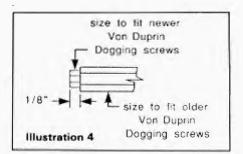
The first tip is for holding the bar down to keep the door from latching during the day. The locks on some of the doors have dogging screws that have become worn over the years. They no longer do a proper job of holding the latch back, because the dogging screws have become loose or stripped out. The pushbar hook is my solution for these doors. (See illustration 3.)



The hook is made from a piece of 3/16" rod that is formed into a ring with a hook as illustrated. The ring is welded shut so it will not come un-done with use. The eye bolt is installed with a Riv-Nut fastener so that it will not pull out of the metal door, and a lock nut is used to keep the eye from turning or coming loose. After the eyebolt is installed, the hook is bent so that it will

be the right length for the height of the lock bar. The eye can be adjusted in or out, to compensate for any error in the length of the hook. I install the hold down hook as close as possible to the lock end of the bar. When not in use, the hook hangs loose on the bar.

My second tip is for a dogging key that will fit all the Von-Duprin panic bars. The older ones use a larger hex wrench than the newer ones. What I do is grind the end of a large dogging key so that it has a smaller hex on the end. The smaller key is long enough to work the dog screws and short enough to allow the larger hex to enter and work



the larger dogging screws. (See illustration 4.) Grind the key carefully, and quench it in water to cool it. That way you won't get it too hot and draw the temper or make it soft.

I hope these ideas help a fellow



locksmith solve some of the problems with this type of lock.

Carl Dilbeck Illinois

It is a lot easier to drill the doors for locks if you can wedge the door in a halfway open position. I came up with this idea and it works great.

I had a channel made from 12 gauge sheet steel to fit a 2" door, I have a ¾" board and two pieces of ¼" plywood to fill in and protect the finish on different sized doors. I cut a 4" C-clamp in half and reversed the clamp screw to use the swivel foot to wedge the channel to the floor. The C-clamp was then welded to



A wedge to hold a door in a halfway open position.

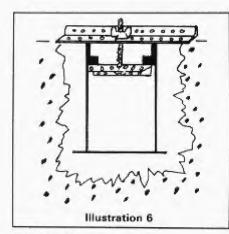
the channel as shown in photograph five.

Slip the channel under the door and tighten the clamp screw against the floor to secure the door in almost any position. In some cases, you might want to place a piece of rubber mat under the swivel foot to protect the floor.

Bob Davison South Dakota

This tip is for an easy to make floor safe installer, that can be made up right on the job, and is inexpensive enough to be disposable. The only materials required are a short piece of perforated steel angle and a ¼" × 6" bolt.

Measure the inside diameter of the safe, below the head flange. Cut a piece of angle, ¼" shorter than this dimension, to fit inside the safe. The remaining piece of angle should be long enough to span the hole in the floor. Using the ¼" bolt, fasten the two pieces of angle together, with the shorter piece inside the safe. The installation bracket can now be used to suspend the floor safe in the hole, level with the floor, while the concrete mix is poured and

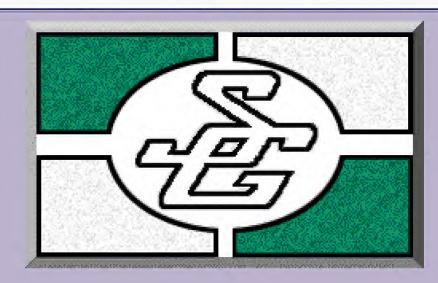


set. (See illustration 6.)

This tip also works with square floor safes. If the rim of the safe is to be raised above the floor level, spacers can be inserted under the supporting angle. In a tight corner, the angle can be positioned to obtain the necessary clearance.

Anthony DeFranco Illinois

When cutting a key by the progression method next to someone's trunk or car door, I use a Curtis clipper for portability and a small note pad with



Choose S&G Comptronic electronic safe locks for...security... technology...tradition.

my notes on what cuts to make on the key. I found that a pad of paper would blow away, and clip-board was clumsy and might damage someone's paint job, if laid on the customers car. My tip is to use a "Post-It-Note" to record the cuts. These sticky notes can be placed right on the car, without damaging the paint or blowing away. It will leave both hands free to cut and try the key.

R. Lazich Wisconsin

Editor's Note: Format and rules for progression shown in illustration seven, for the newer locksmiths.

Illustration 7

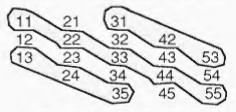
11	21	31		
12	22	32	42	
13	23	33	43	53
	24	34	44	54
		35	45	55

only possible cuts shown

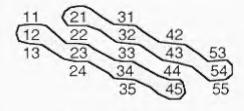
Rule 1: Maximum adjacent cut difference is 2, 1-4, 2-5 etc. are impossible combinations.

Rule 2: The sum of the cuts will always be an even number.

If the sum of the known cuts is even, the sum of the unknown cuts must be even, so that the sum of all the cuts is even. Even cuts shown shaded below.



If the sum of the known cuts is odd, the sum of the unknown cuts must be odd, so that the sum of all the cuts will be even. Odd cuts shown shaded below.



I would like to offer an alternative method of opening a GM trunk, when the car is equipped with a sidebar-type lock in the glove box. When the glove box is locked, there is no way to open it to read or find the combination to make a key without destroying something.

Peel off the face cap of the trunk lock, being careful not to scratch the paint. Remove the shutter assembly and shutter springs. Drill a 1/16" hole in the outer edge of the recess over the sidebar. (See photograph 8.) Angle the



Drill a 1/16" hole where indicated to open a GM trunk.

drill outward slightly to avoid damage to the brass sidebar retainer and spring. Drill carefully until the drill just breaks through into the sidebar compartment.

Take a piece of spring steel the same size as the hole, and bevel the end just a bit, so that it will enter and put pressure on the sidebar almost immediately. Rake the wafers while inserting the

Continued on page 106

NATIONAL AUTO LOCK SERVICE, INC.

National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.

www.laserkey.com

Newsmakers

New Products and Industry News

The Abus Plus 37 Rekeyable Disc Cylinder

Abus Lock Company recently introduced the new Abus Plus 37. The new rekeyable "Plus Secure" disc cylinder padlock features seven locking disks which provide a mechanism that makes possible over 250,000 key changes.

An Abus Plus decoder is provided making rekeying a simple and fast procedure. No pins and springs have to be assembled. The locking action is carried out by a bolt pin which secures the cylinders with its whole length. The 37 Plus is available with 1" or 2" shackle clearance. For simple key cutting Abus provides an adaptor that

makes key cutting on most standard machine possible.

The design of the Abus Plus 37/60 includes a shackle guard and detachable shackle for maximum security applications, particularly where limited shackle exposure is desirable.



Circle 356 on Rapid Reply

Locksoft Announces IBM Compatible Computer

Responding to the needs of the locksmith industry, Locksoft Inc., has announced the introduction of their IBM compatible computer. It is available completely equipped with dozens of programs already installed on a 20 meg hard disk. A menu program allows the novice user to start using the computer just by turning it on.

Jon Payne, President of Locksoft, says that an IBM compatible computer is an excellent choice for the small or large locksmith shop and allows the user to take advantage of hundreds of business programs available, many for little or no cost.



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Is a Self-Portrait

Of the Person Who Did It.

Autograph Your Work

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Aable Locksmiths New Breaker Kit

Frank Markisello of Aable Lockmiths, has designed a tool kit, called breaker kit, which will enable you to gain entry through most tubular key cylinders and locks. The first tool is designed to be inserted into the keyway. Apply a slight turning pressure, and the centre hard head will break out in 15 seconds, on the cylinders which have a hardened centre head, to prevent drilling of the lock.

Once the hard head is out, just take the second tool, a drill guide. Insert it into the keyway, take the 5/16" drill bit, and drill about ¼" deep into the cylinder. This will shear the centre core from it's housing, causing the centre core to rotate freely. On cylinders with soft center heads, you will just use the second tool.



The kit comes with complete detailed instructions, on various types of cylinders and locks, and which tool to use and when. It also includes photographs showing how to get through the new security tubular cylinders, which have a steel pin across the centre core and the shear line. Once you have removed the hardened centre head, this pin will now be clearly visible, for fast removal. These types of cylinders are used on most new vending equipment.

Circle 358 on Rapid Reply

Scotsman Offers New Service

Beginning April 25, 1988, locksmiths, security dealers, and distributors are invited by Scotsman Security Products to use a toll free telephone number. For national calls, use 1-800-321-GARD. California callers, use (209) 295-5498 (collect).

Locksmiths and security dealers seeking product information or information regarding distributors from whom they might purchase Scotsman products are encouraged to call. Distributors may use these numbers for ordering.

Circle 365 on Rapid Reply

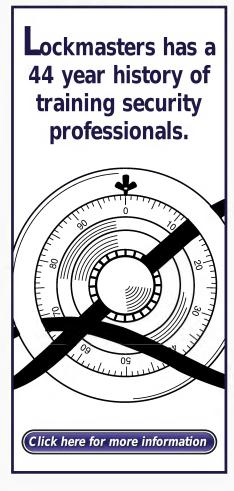
The ALS#56 Chrysler Ignition Removal Kit

The ALS#56 is a kit designed to remove the ignition cylinder from most Chrysler products without disassembling the steering column, thereby saving up to a forty-five minutes of labor. The ALS#56 eliminates the need for special tools; all that is needed is a drill motor, a straight-slot screwdriver and an awl.

To remove an ignition cylinder using the ALS#56, first disconnect the battery. Then, pry the chrome winged cap from the ignition cylinder using the straight-slot screwdriver. Position the tool on the ignition cylinder. Following the instruction sheet, drill at the appropriate location, depending upon the type of column you are working on. By drilling, you will shear the retainer(s) holding the cylinder in place.



Circle 359 on Rapid Reply







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Micro Security's PC Guardian

New electronic locking hardware to control keyboard access to IBM PS/2 Models 50, 60, and 80, is now available from Micro Security Devices, Inc.

The PC Guardian security device protects data by reserving access to keyholders. It also enables a keyholder to run programs while the keyboard is locked, preventing accidental or deliberate alterations in data. Additional PC Guardian products prevent theft of components and peripherals.

The PC Guardian keyboard lock can

be installed easily in minutes by end users. The IBM's keyboard cable plugs into an electronic lock, and a new cable runs from the electronic lock to the keyboard cable port. The port is protected by a metal lock, preventing substitution of an unsecured keyboard.





Don't panic! We have Security Exit Devices.

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Detex Announces Slim-Line Exit Alarm Series

In the first major re-design since its introduction more than 20 years ago, the Detex Exit Alarm has been totally re-styled to provide a new slim-line look with added features. The new Exit Alarm series is available in 2 models: EA-500 battery-powered surface mounted units and EA-2500 ACpowered, surface or flush mounted

Only 3" wide and 81/2" long, the EA-500 Exit Alarm measures 3" x 81/2" and mounts easily on narrow stile doors. Also among the new features included in the overall re-design is new circuitry permitting use of a patent-pending electronic piezo horn which produces a powerful 95-decibel directional alarm.

The EA-500 battery-powered model is non-handed and can be mounted on the latch, hinge stile, or top rail of a door. The alarm circuit is triggered by magnetic contacts, either internal or external, which detect any door movement. It features closed-loop circuitry for all sensors; the alarm sounds if the circuit is broken. A screw-on cam lock secures the cover for security.



American Shield Corp.'s **Exit Indicator Switch**

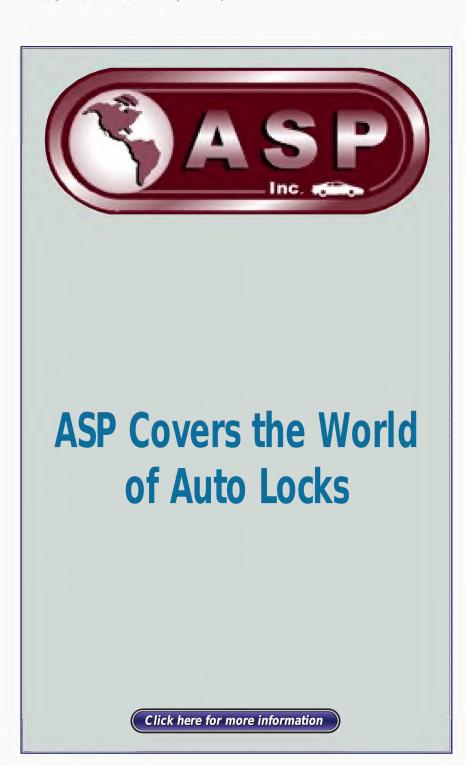
American Shield Corporation has added the El-1000 Exit Indicator Switch to its line of accessories for the JPM 90 and 93 Series exit devices. The switch allows you to increase security on a door by letting you know each time an exit is being attempted.

Small and lightweight, the EI-1000 is a self-contained module which slips into the push bar, either in your warehouse or in the field. It can be wired to signal an alarm, light, buzzer, or other indicator each time the push pad is depressed. This can also indicate that the dogging feature is in use.

National Locksmith Offers Foreign Auto Lock Manuals

The National Locksmith has added a new set of foreign auto lock service manuals to the arsenal of locksmith books offered. These are the famous guides written by specialist Lynn Hawkins. The set includes the following three books bound in separate three ring binders: Japanese Autos, German Autos, and European Autos (except German). The set is available complete for the price of \$134.95. Or you may





purchase any of the individual books separately for \$49.95. An update for the Japanese book is sold separately for \$14.95; it is not included with the set.

Each volume contains specialized information needed for servicing all the vehicles covered. The details covered include: listing of tools needed; removing steering column shrouds; removing shear head bolts; removing retainer pins; removing door paneling; removing and replacing cylinder face caps; and reading wafer/disc tumblers.

High quality photographs are included for each of the many vehicles covered. These show the specifics for the vehicle. You will learn where the code numbers are located and how to reach them. Where impressioning is the method of choice, full data is given. Also, space and depth information is clearly presented.

Here is a breakdown of the models covered in each volume. Japanese: Chevy Luv, Chrysler imports, Datsun/Nissan, Ford Courier, Honda, Isuzu/-Mazda, Misubishi, Subaru, and Toyota. German: Audi, BMW, Capri/Fiesta, Mercedes-Benz, Opel, Porsche, and Volkswagen. European (except German): British, French, Italian, Swedish, and miscellaneous cars are covered.

Lori Adds To Door Hardware Line

Lori Lock has recently introduced a new line of commercial locksets for application in commercial, institutional and industrial buildings, where security, durability and aesthetics are most important. This compliments Lori's growing line of door hardware, which also includes solid brass designer hardware, Kaba high security systems, deadlocks and auxiliary locks.

The new Lori Lock commercial lockset line includes heavy duty mortise, heavy and standard duty cylindrical key-in-lever and key-in-knob locksets, and interconnecting locksets.















Change And The Locksmith

"This month's article will discuss some of the forces affecting the locksmith. Then we'll look at some changes you can make to remain profitable."

by Sean DeForrest

An especially "hot" issue over the last several years has been the dramatic changes that are occuring in the locksmith industry. "How will the locksmith cope and survive in this new business environment?" This has become an important question. Specifically, how will you be able to manage your business for more profit? This month's article will discuss some of the forces affecting the locksmith. After discussing these forces and showing how they are changing the locksmith industry, I will outline the major areas that locksmiths must address if they are to remain profitable.

When I say, "new business environment" and "dramatic changes" in the locksmith industry. I refer to how the channel of distribution (see illustration 1) is changing. The most visible sign of this change is the consumer, who over the last several years has become a more sophisticated buyer and has demanded better value for the products he buys. It is no coincidence that this sophisticated shopper has appeared on the scenes at the same time that our markets have become more globilized.

Consumer imports are a permanent fixture in American markets, including the security industry. New retailing methods have responded to the 1980's consumer in a variety of ways. This has led to the second change in the distribution channel-the rise of the home center and warehouse outlet who are now selling home security products. These large distribution centers, operating on smaller margins, have put tremendous pressure on other retailers (such as locksmiths) and will continue to do so in the future.

The third link in our distribution chain is the locksmith distributor. The locksmith distributor is currently experiencing a dramatic change in his mode of operation. Larger distributors are



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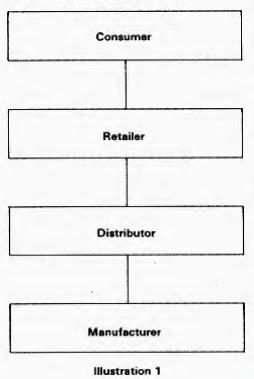


using economies of scale to price products more competitively and garner an even larger market share. Our distributors are focusing on local markets and will become smaller "niche" players. For example, currently approximately six locksmith distributors have revenues eight to ten times greater than the national distributor average; and this trend will accelerate over the next several years.

This concentration of power among a few wholesalers will have a profound impact on the locksmith. These large wholesalers will cater their service and programs to larger locksmiths. The net result is that smaller locksmiths will pay more for services and be subjected to higher ordering costs. Therefore, smaller locksmiths will have to consolidate purchases with one or two suppliers, choose their own local niche distributor, or network their purchases with other locksmiths.

Finally, the manufacturers are changing their philosophy of distribution by relying more on the specialty wholesaler distributors to sell their products. While manufacturers will still count on home center operations to sell commodity products, they are increasingly developing the distribution channel as a better way to penetrate the marketplace. Large wholesale distributors with efficient operations are convincing more and more manufacturers that selling products through distribution, rather than direct, is a

Security Products Distribution Channel



more profitable approach. Distributors then are becoming more important to those manufacturers with specialty products or services.

These many forces of change are impacting the retail locksmith in the following areas: 1) Locksmiths must create and maintain "service value" to customers that clearly distinguish them from home centers and warehouse operations. Note: This does not necessarily mean locksmiths must increase their business size. Locksmiths can profitably sell products and remain small businesses by catering to very specialized or unique services (i.e., foreign automotive work or car openings).

2) Locksmiths who do not increase their business will have less freedom to choose where they purchase products. In the future, smaller locksmiths will either choose "niche" wholesalers or face higher ordering costs from the larger suppliers.

3) Those locksmiths who do increase their business will face new challenges on how to manage their businesses in a new competitive environment. These new challenges include such issues as financial analysis, personnel management, and strategic marketing, which will be discussed in future articles.



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Locksmith Manufacturer Profiles

"In this article you can take an up close and personal look at some of the firms manufacturing products for this industry. Let's get to know your manufacturers."

Crimestoppers

It started in Los Angeles ten years ago with the first paging alarm system for the automotive market. Those were the days when the cost of the average car had not reached the extravagant limits of today. People weren't concerned about vehicle theft...things like that always happened to the "other guy." The automotive alarm market was limited to a small number of expensive specialty, sports and luxury cars. But that was all due to change.

Crimestopper President Howard Miller saw it coming. He believed that it was only a matter of time before the social and economic conditions that created the demand for vehicle alarm systems on the East coast would spread to the west. It did. The market developed, the product line grew and the company flourished. In 1978, the Dick Tracy logo and the name "Crimestopper Security Products" established the image needed to identify a progressive company with a state-of-the-art product line. In each successive year, Crimestopper has continued its growth with an expanded and refined product line.

Ever since the company's inception they have pioneered many prodeuts that have become common in the auto security market of today. They were instrumental in the evaluation of the remote transmitter and now offer a product, the Stiletto remote, which is the thinnist three-channel transmitter on the market. Crimestopper offers a variety of products that provide both security and convenience to the consumer. This would include remote window roll up and down units as well as door lock and unlock accessories to name just two.

The extensive line of accessories permit an installer to customize a system to fit the particular needs of each consumer. Every year more products are introduced that are user friendly. Examples of this include the automatic



The market leader in locking systems for security, safety, and control.

passive arming alarms.

This year's line includes a variety of new systems and accessories specifically designed to carry auto security to the next plateau. The new CS-8800 Samurai Remote Control Alarm System proves that a vehicle can be totally protected for a price that will not bust a modest budget.

A new door lock system assists the installer in performing his job in a more efficient and time consuming manner. New remote control modules permit the easy installation of convenience features such as door locks and window roll up and down systems.

Crimestopper strives to produce items that will assist the locksmith in the installation and troubleshooting process. This would include the installation test analyzer, bench tester, adjustable voltage sensor, and other accessory items.



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with Excellence.

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Gardall Safe

Syracuse, New York has always been the home of Gardall Safe Corporation. In the late 1940's, Henry Bluestone, the founder of Gardall was a salesman for Mosler Safe Company. Mosler decided to close its manufacturing operation in Syracuse and move all manufacturing to Hamilton, Ohio. Henry did not want to move to Ohio, so in 1950 he decided to start Gardall Safe Corporation along with the assistance of George Bloch. Henry's responsibilities were sales and marketing and George was responsible for manufacturing. As one would expect, the insulated safes that Gardall produced at that time looked a lot like the Mosler insulated safe.

The business steadily progressed and under the economic pressure of expanding the business, Henry decided to sell Gardall Safe Corporation. He sold it to Adolph Falso and his sons in 1970, and stayed on as sales manager. The Falso's background was in manufacturing heating, ventilating and air conditioning products, and sheet metal fabricating. This proved to be very helpful in improving the construction quality of the safe line and under the Falso management the company continued to grow. Adolph "Butch" Falso became very involved with the company in 1978, making many innovative changes to the insulated line and adding new products to the product line in the following areas: 1) Floor Safes 2) Rotary and Front Loading Depository Safes 3) Wall Safes. Gardall focused on a small line of premium quality safes for home and business use

The ownership of Gardall changed for the 3rd time in it's 36 years in July 1986. The new owners are David Patton and Edward Baroody. As was true with the Falsos, the new owners are dedicated to continuing the Gardall tradition of manufacturing premium quality constructed safes with a strong appearance.

The company sells and distributes its products through a strong network of stocking distributors. This program was designed to make it easier for the locksmiths and safe dealers to get products faster and at a more competitive price.

Gardall Safe Corporation manufactures a full line of insulated safes that, size for size, are constructed of materials that make them heavier and stronger than some other insulated safes on the market. The small and medium size insulated safes have the Underwriter Laboratory (UL) 1 Hour -350° label, and larger insulated safes have a factory tested 2 Hour label.

Gardall's unique "Z" series safe is an insulated safe with a "B" rated burglary construction money chest welded inside. They continue to manufacture a high quality line of rotary and front loading depository safes, floor safes and wall safes.

Recently, the redesigned "In Floor Safe" line enabled them to produce a quality unit at a more competitive price. Additionally, they added key and combination safe doors that will interchange with each other as well as most other safes in the burglary line. The interchangeable door makes it easier to remove a door, in case repair is necessary, or to interchange a key for a combination door, or visa versa. Obviously, this gives the dealer the flexibility of offering his customer the choice of a key or combination operation on any burglary safe in his stock. All Gardall safes are equipped with Sargent and Greenleaf locks, dials and dial rings.

Circle 324 on Rapid Reply

HPC, Inc.

HPC first opened its doors for business in November of 1956. From that opening day a commitment was made which was based on two ideals: dedication to the quality of their products and the guaranteed satisfaction of the customer. It is this philosophy which has proven to be the cornerstone of HPC's continuing success.

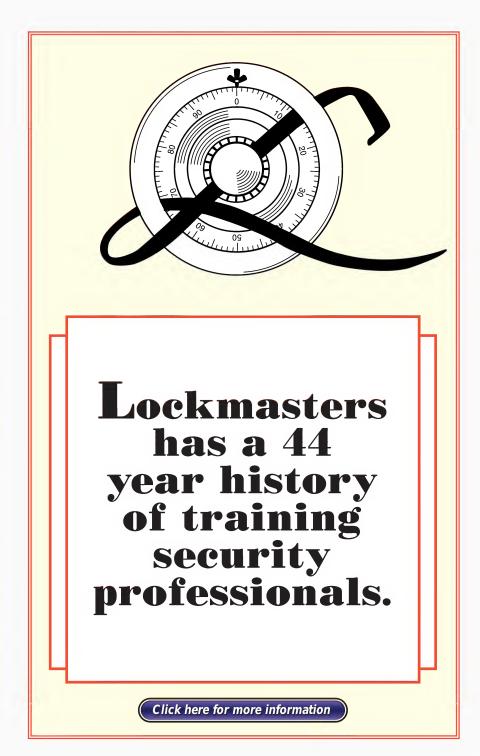
The HPC tradition is rooted much deeper than a mere 31 years would indicate. In fact, this tradition began some 60 years ago with a unique individual. He is the key to understanding the important position that the company holds in the security industry.

Harold Hoffman was a renaissance man, a master of many trades. He was an expert fisherman, wrestler, locksmith, inventor, distributor, and manufacturer. However, the security industry is fortunate that his first love was locksmithing.

Harold Hoffman began his lifelong committment to locksmithing in 1928 when he founded the S & S Key Service in Chicago, Illinois. This small locksmith shop and bicycle repair service grew into a retail business of major proportions through the untiring efforts of Harold Hoffman and his wife, Frieda. The retail operation however, paled by comparison to the suc-

cessful wholesale distribution business. Therefore in 1943, Harold and Frieda realizing that they could not effectively operate in both the retail and the wholesale fields of locksmithing, decided to concentrate all their efforts into their wholesale business.

During this time there was yet another interest in Harold Hoffman's life. This was his love of manufacturing. He realized that he would now have some time in his busy schedule to concentrate on inventing new products. Two of his earliest successes were the Chrysler Pin Tumbler Decoder and the development of the modern lock pick. The invention of the lock pick as we know it today is credited to this man. Prior to his contribution to the manufacture of this product, all lock picks were made by hand. It was Harold Hoffman who perfected a revolutionary technique for mass producing these tools.



The lock pick, however, was just the beginning. Soon, other innovative tools, such as the Simplex key machine, were created that became the cornerstone of the H. Hoffman Company reputation.

The next Hoffman generation was equally successful. Harold and Frieda's two sons, Jerry and Al, also joined the family business. Al entered the family business in 1949. His brother Jerry joined the firm in 1954. While it was obvious that both sons had decided to make this business their life's work, their particular interests differed.

On that day in November of 1956 the two brother realized that both businesses had grown to the point that they must be divided in order to pursue their own individual destinies. Therefore, in response to his sons wishes, Harold Hoffman divided the single parent company into two distinct separate companies.

HPC eventually moved to its present location in suburban Schiller Park, Illinois. This modern 30,000 square foot facility is strategically located near Chicago's O'Hare Airport. The modern physical plant itself boasts the most skilled and dedicated technicians as well as the finest in state-of-the-art

manufacturing equipment.

Those early years provided the security industry with some of its most important and innovative products. Such items as the Slim-Jim, the KEKAB key control systems, and the HPC line of lock picks are the standard. This is a proud tradition that HPC has chosen to follow.

The year 1977 was a watershed mark in the HPC story. It was during this year that Keyways, HPC's own quarterly newpaper was established. Since that day HPC has branched out into many security related areas including HPCSoft (security related software programs), and HPC Learning Centers (teaching security at accredited schools and educational seminars).

Circle 325 on Rapid Reply

Ilco Unican

What is Ilco Unican? By the truest meaning of the word, Ilco Unican is a manufacturer. It makes or obtains basic raw materials, which it then fabricates into products that are sold in the marketplace. It uses the traditional method of distribution, that is, it makes its products available through a network of trade wholesalers. It goes by the book.

But the book doesn't tell the whole story about Ilco Unican. There's more. Today, Ilco Unican exists as a vibrant, progressive company that literally touches every lock shop in America and many around the world. It would be a task indeed, to find a shop, regardless of its size, that does not have an Ilco Unican product in it, or has not sold an Ilco Unican product. Over its 66 year history, the name has become one of the best known in the industry.

While Ilco Unican now is world-wide in scope, it still functions primarily in the locksmith market. It was, after all, started at the suggestion of a locksmith, the brother-in-law of the founder. Business began by catering to the needs of the locksmith. It pioneered in the code cutting business, produced hundreds of different key blanks for four generations, branched into key machines, locks, builders' hardware, door closers and a host of other items.

Ilco Unican has survived the cruelest test of all—time. While it flourished under it original founders, it struggled under the successors and teetered on the brink. Even under the early days of ownership by Unican Security Systems, Ilco struggled. But, it survived.



HPC, Inc.
Designing Excellence and Manufacturing
Quality since 1956

The amazing part of its survival has been a return to its basic business philosophy—to help the locksmith. Key blanks represent its primary product—a mind boggling 1.3 million a day. Under its present structure, Ilco Unican catalogs over 5,000 different key blanks, for the worldwide market. The names of Ilco, Dominion, Taylor and Orion are now part of the corporate structure. The honored names of the past that were prominent for decades before joining The Unican Group. The experience of these companies is now evident in one—Ilco Unican.

Key machines are an equally important part of the Ilco Unican line. It makes machines available to fit a variety of needs, from standard keys to high security, from conventional cutting to angled or dimpled. All are part of Ilco Unican's impact on the world.

Perhaps the real definition of Ilco Unican can be obtained from its people; the men and women who produce the product, package it, ship it and sell it. They're experts at their chosen tasks. They have made and continue to make Ilco Unican what it is today. They're concerned employees who see that the job gets done. They take pride in their work and in the company. These employees now make up eleven divisions, spanning nine countries.

The Ilco Unican team has worked hard to regain the position that Ilco once held as a top supplier in the locksmith trade. They are working as hard to retain that position. Ilco Unican is committed to improving and expanding all of the products that are sold and serviced through locksmiths.

What is Ilco Unican? A supplier to the locksmith; the locksmith's company. Still a believer in one-on-one, you talk, Ilco Unican listens and supplies. It's the basic formula for success.

Circle 326 on Rapid Reply

La Gard, Inc.

La Gard, Inc. was founded in 1975 by a small group of talented individuals with expertise in a variety of technological specialties such as: aerospace, tool and model making, new product development, high security mechanical engineering, manufacturing, and business administration. Located in Torrance, California, La Gard has access to the most modern manufacturing processes and methods in use today. La Gard products are manufactured using precision and complex diecasting, fine blanking and ultra precision powder metal casting.



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Quality Products,
Innovative
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Strong Partners.

The company specializes in the manufacture of high quality, combination safe locks, combination lock dials, boltwork systems, and safe doors. Also an important part of the line are high tech key machines.

Throughout its history, La Gard has concentrated its technological resources toward new product development in the medium and high security industries, and is recognized as a leader in security product engineering. The company uses the latest in computer aided design and manufacturing techniques to produce products on the leading edge of high technology materials engineering.

By using this accumulated expertise, an ultra-modern machine shop, and high speed production capabilites, La Gard produces high quality, cost effective components for its products, privately labeled products and the custom designed specials. La Gard and its founders have also been awarded the Modern Metals Casting Competition Merit Award, awarded in open competition for excellence in the field of zinc die casting, as well as the Producer Award and The National Locksmith Award. La Gard is continually expanding its staff, manufacturing resources

and facilities to better serve the security industry, while maintaining the standards of excellence that ensure locking mechanisms for the future.

Their most popular products, already familiar to locksmiths include the following. Model 3330RL is a Group 2, three wheel combination lock. Model 1980-A RL is an antimanupulation three wheel combination lock. Time locks manufactured by La Gard include the 2400 and 1600 series. The firm also makes an electromechanical combination lock called the Smart Gard.

Combination lock dials include the Restrict-A-Vision dials and rings, as well as the 1700 series, the Vision Gard and the Flat Gard. There are even several models of key operated safe locks. Boltworks, safe doors, and a high security padlock are also offered by La Gard.

Circle 327 on Rapid Reply

Locknetics

For over 18 years Locknetics Security Products has been a leader in electro-magnetic lock technology. The Locknetics philosophy has always been to provide a full product line that enables the customer to purchase a total



system package.

This concept allows the sales engineering department to assist the locksmith in the design of each system and in the process of product selection. It also provides the customer an opportunity to learn what electronic security products are available, how they work, and their compatibility with other system components. It is Locknetics' intent to increase the customer's knowledge in this manner, enabling them to participate in a larger share of this market.

Locknetics is especially proud of its relationship with the locksmith industry. The company's first address was a "shared" facility with a Connecticut locksmith company. Increasing business has required three moves to larger facilities in the past 18 years. The mod-



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ern factory in Hamden, Connecticut now consists of over 10,000 square feet of space.

Their product line has expanded as well, and now includes: the newly redesigned 271 shear magnet, electric locking devices, power supplies, and programmable system controllers. Also the heavy duty station controls including: key switches and pushbutton, monitoring devices and a complete line of associated hardware. The variety of the line enables the company to cover almost every system requirement.

The staff has also grown to include some of the most knowledgeable personnel in the industry, and is at the customers' disposal for systems, products, and sales support.

During the years of Locknetics' existence, they have provided the locksmith trade with unparalleled support. Locknetics' products are carried throughout the country by major locksmith supply distributors. Training seminars have been held by staff at these distributors facilities upon qualification of request. Locknetics has also provided seminars at area locksmith trade shows.

The mutual cooperation between

Locknetics and the participating locksmiths has been most profitable for both parties. They plan to continue their efforts to encourage the locksmith to take part in the fast growing and lucrative field of electronic security.

Circle 328 on Rapid Reply

Sargent & Greenleaf

Throughout its long history, Sargent & Greenleaf, Inc. has operated on the leading edge of security technology, always looking forward to new concepts and techniques. From its beginnings, S & G's products continued to revolutionize the industry.

The S & G story really begins with one extremely talented man, James Sargent. After working in various fields, Sargent became associated with the Yale & Greenleaf Lock Co. in 1857. As a salesman for the firm, he had the chance to closely study a wide variety of locks and soon demonstrated a remarkable ability to pick any lock submitted to him.

With this knowledge, he set about designing locks that even he could not defeat. This effort resulted in the world's first key changeable combination lock, which he produced under the name "James Sargent, Manufacturer." After designing the first "magnetic" combination lock in 1865, Sargent joined with Col. Halbert Greenleaf in a partnership that would spur the company on its way.

In 1873, James Sargent had finally perfected the world's first time lock. Bankers were wary of the device at first, however, it soon became a standard security device in the industry. S & G greatly expanded its lines of combination and time locks as new technologies emerged.

In 1921, the company began marketing an improved changeable, sealed key safe deposit lock. It soon became one of the leaders in the industry. Over the years, S & G continued to devote its energies to the development of high security equipment.

Today, Sargent & Greenleaf is still hard at work on the latest security technologies. New product development is at an all-time high, with more ideas on the drawing board than ever before. Significant emphasis remains, however, on the traditional product line which is continually upgraded with the advent of new manufacturing techniques.



ASP - Your Auto Service Center for the World

S & G is currently entering the age of electronics, with the introduction of an electronic time lock, hotel safe lock, and time delay lock. The electronic locking devices enhance an already extensive product line, and offer the security industry a wider variety of locking mechanisms from which to choose. The recently expanded customer service and sales departments monitor the requirements of an everchanging industry in an effort to provide excellent quality and service.

Security Door Controls

Among electronic lock manufacturers SDC is one of the few in which all solenoid and magnetic coil design and manufacturer is in-house, with all SDC solenoids meeting military grade specifications.

"When I began planning and designing our new electric locks, back in the 60's and 70's," states Art Geringer, owner and president of SDC, "I outlined several prime objectives. We knew that entirely new designs were necessary. They should be fully concealed and thus aethetically acceptable; they should provide greater security, always top quality in every detail, and they should also be 'smart locks'. Our sensor equipped locks of today are smart locks indeed."

The locks designed and patented by Geringer are the right-angle throw Space Saver locks, which install in standard 1¾" frames (or even 1¼" frames today). They rapidly became the pattern for concealed electric locks and have been a major factor in creating a new world of electric security, safety and control.

Following the innovative Space Saver locks came SDC's Dual-fail-safe locks; the PanicLoc, GateLok, the powerful electromagnetic EMLocks, and a full slate of accessories and systems. Research and development is a strong and continuous concern at SDC.

"The whole industrial and commercial (and military) world now is dependent on access control systems," says Geringer, "and access control systems from the simplest push-button to the most complex, multi-entrance computer-operated system, can't work without electric locking devices. It's a fine partnership and we're happy with our position in it."

Security Engineering

Security Engineering Inc., was incorporated in 1975 and has grown substantially both physically in size and in its share of the marketplace since that time. Security Engineering's modern 15,000 square foot manufacturing facility now employs 40 people, whose primary function is to engineer, produce, and service its broad line of electromagnetic and electric deadbolt locks, control and monitor controls, power supplies, and station controls.



The "engineering" in Security Engineering has been the driving force that is directly attributable to the company's rapid growth and accep-

Continued on page 106



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Security At The Mall

"Large malls can have every imaginable type of locking mechanism with dozens of different lock and key manufacturers represented. There's money at the mall!"



Send your lock and key questions to Jack Roberts, The National Locksmith, 698 Bonded Parkway, Streamwood, IL 60107.

by Jack Roberts

The past couple of decades have seen the growth of shopping centers, malls, and mini-malls throughout our entire country. Ranging in size from sprawling conglomerates that may cover 80 to 100 acres, to small strips of only one building and perhaps a dozen shops, these centers offer more than just a place to spend a buck. Shopping the malls for business rather than merchandise can be a very lucrative pastime for the alert and aggressive locksmith.

In contrast to an office building or a factory which usually has the same type of cylinders and keyways, perhaps masterkeyed to a certain sectional, larger malls can have every imaginable type of locking mechanism with dozens of different lock and key manufacturers represented. While the smaller malls and the strips may be controlled by the owner or developer who may have control of the security of the building and each shop, larger malls often have control of only the perime-

ter openings with each shop responsible for individual security.

If we examine the occupancy of the larger malls we will find that the greater percentage of shops are national chains or franchises with security being controlled from regional or national head-quarters. It is not unusual to find one or more of these shops located adjacent to each other in the same mall with all of them controlled by one supervisor who is also in charge of security. Locating the proper person can be rather difficult but the search is rewarding for the enterprising locksmith who will track that person down and sell security service.

General security may be controlled by the developer who has a master key for the entire strip and who has written into the lease agreement that rekeying of cylinders must be done in accord-



 The cylinder appears to be built into the gate.

ance with the masterkeying system for the building. The developer may also be responsible for general maintenance which could include door closers and other door hardware. In this instance the developer is the person to contact for service of the building and this can be determined by simply asking one of the tenants. Other lease agreements leave the control of security and maintenance to the individual shop owner or operator. This can also be determined by asking a few questions and then offering your services.

The larger malls and shopping centers usually have a full scale maintenance department that has charge of perimeter security along with mall operations. The maintenance supervisor is usually the person who must be sold on your ability to service those areas which come under his or her control.

There is such a wide variety of locking mechanisms employed in the various openings of mall shops that an overview can only touch on a few.

Rekeying a cylinder, in most instances, is no big deal. Getting the cylinder out of the door, gate, or frame is often the real job and can create quite a challenge. Locating the cylinder retaining screw is difficult and it may appear that the gate or door was built around the



It's not safe unless it's Schwab Safe.















NATIONAL AUTO LOCK SERVICE, INC.









locking device. (See photograph 1.) In some instances the door must be removed to gain access to the cylinder. Two or more keys may be required for opening and closing; one cylinder which will control the lock and another which activates the gate motor. (See photograph 2.)

Many national chains use a time lock of some type. The most prevalent of these are the Phelps Time Recorder Co. and The Silent Watchman Co. The purpose of this type of locking mechanism is to make a record of the date and time that the cylinder is actuated. This record informs supervisory personnel of late openings, early closings, or of unauthorized entry during normally closed hours.

The Phelps Time Lock in photograph three consists of a case which can be mounted anywhere in the vicinity of



2. Key operated gate motor.

the opening. It is not unusual to find a Phelps Time Lock that really does not lock anything, but the massive bolt, (see photograph 4) blocks the keyway of the cylinder that actually unlocks, or opens the door or gate.

This type of installation will often be found on closures which operate vertically such as a gate that rolls up into the attic space. Horizontal sliding gates usually have the time recorder mounted on the wall surface. A hook type bolt is installed in the recorder and a special strike is installed on the lead-

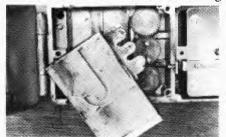


3. Phelps time lock.

ing edge of the gate.

Most of the Phelps units that you may find will have a Best cylinder although the Yale 8 is not uncommon to these locks. Many of the national chains, which employ the Phelps system, use Best cylinders which are controlled by Phelps who furnishes keys, cores, cylinders etc. to area store supervisors or to the central security department.

Emergency service to these units should be just that, emergency service only. The store or shop personnel or the supervisor will have the phone number for the Phelps regional office who should be contacted for advice on permanent repairs. The Phelps Time Recorder System may also employ the use of interlocks on other doors or openings in the facility and these must be considered when effecting



4. Large Phelps lock bolt.

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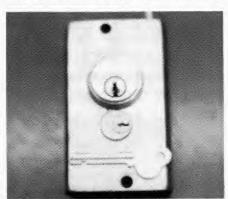




emergency service.

In contrast to the Phelps system which is primarily a mechanical time recorder, The Silent Watchman system (see photograph 5) is both electronically and mechanically controlled. This company utilizes its own keyway (easily recognized by an eagle-eyed locksmith) and control the issuance of all keys. The keys have the cylinder operating cuts in the blade and also have cuts in the bottom which activate electronic switches located in the lock housing. (See photograph 6.) These cuts identify which key was used to turn the plug in the cylinder. The key number, the time, and the operation of the cylinder (i.e., lock or unlock), is recorded by a small printer which is a part of the complete installation.

Silent Watchman installations may also activate many different types of alarm systems, and great care should be exercised when performing emergency service. As with the Phelps system, store or supervisory personnel will have a number to call for assistance.



Silent Watchman system with its own keyway.



Keys featuring blade cuts and bottom cuts for electronic switches.

Even with the best planning though, things can go wrong. Recently in a local mall a new occupancy was in a big rush to get the store opened for business. This space had a rolling overhead gate controlled by a Folger Adam keyoperated security switch. The keyway of the Folger Adam was blocked by the bolt of a Phelps Time Lock. The gate controls had not been properly adjusted which allowed the gate to be lifted about 18 inches when it was in the down position. This was Friday evening and the gate people could not be

contacted so management installed padlocks as a temporary measure.

Management neglected to inform the Saturday morning crew of the padlocks. The gate control switch was an on-off (up-down) type with no stopping when the controls were actuated. The gate moved to the limit allowed by the padlocks and that's all she wrote! When management arrived with the padlock keys there was so much pressure on the shackles that it was impossible to open the locks. Mall maintenance had arrived on the scene and recommended that their friendly locksmith be called. The locksmith

spent most of the Saturday getting the gate back into operating condition for the weekend. The locksmith is now security advisor for all of that chain's stores in the area.

Just one example of good rapport with maintenance. The next time you go mall shopping take a look at the security systems installed on each shop. Talk to the shop personnel, ask a few questions, find out who is the proper person to contact, make that contact and offer your services. There are big bucks in a shopping mall—go shopping and get some of them for yourself.



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1988 Honda Civic And CRX

"The locks use an eight wafer bi-directional wafer configuration, with four wafers on each side of the key. You must cut both sides of the key to operate the lock."

by Robert Sieveking

This year, Honda has changed the format of the locking system used on the Civic and CRX model autos. There is a new key, new codes and some interesting problems in making the keys for this auto.

The '88 Honda Civic will use a (Taylor) X172 blank as the primary or master blank, with the (Taylor) X173 for the secondary or valet function. The locks use an eight wafer bi-directional wafer configuration, with four wafers on each side of the key. It is necessary to cut both sides of the key to operate any of the locks on the car. This is,

compared to the previous locking system that had uni-directional locks in the doors and trunk and a bidirectional lock in the ignition only. This allowed a key cut on only one side to operate the doors and trunk, but required that the key be cut on both sides to operate the ignition lock.

Not all the wafers are present on the door locks. Only seven of the eight cuts are required to operate the door locks. The tip or number eight cut is used in the ignition only. After making a key for the door, you will need to progress a key to fit the ignition.

Codes have been published for the

5001 to 8442 series, as are the depth and spacing, but you will have to be careful in generating keys using these codes. The HPC 1200 code card will be FX74.

The manufacturer, in designing these locks for a larger number of combinations and a higher resistance to reading, has increased the number of depths to "6." Yes, these locks have six possible depths. The manufacturer has also given very little consideration to safety factor, or maximum adjacent cut difference. The codes contain many combinations of a "one" cut adjacent to a "six" cut, or a "one" cut flanked by two "five" cuts. This situation becomes



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a real problem if the key is generated using a cutter with the wrong cut angle. The shallow "one" cut gets wiped out by the adjacent deep cuts and has no land, or defined flat pin seat, for the wafer to rest on. The "6" cut next to the bow of the key is another problem to be dealt with.

I've been told that it will be necessary to generate these keys using a Medeco type cutter, widening the cuts as necessary, to assure a good working key. The Medeco cutter (CW 1012) generates a high angled "V" cut, with no flat. This will allow the cut width to be made more narrow than the standard small wafer cutter (CW 1011).

Opening the Civic is fairly easy. The locks use a lazy action type cam that will allow the actuator to move, allowing the door to be opened with a Slim Jim type tool. The passenger door unlocks with downward movement of the cam. Be careful, the actuators are plastic, and it is fairly easy to dislodge the linkage from the cam, which would make it necessary to disassemble the door to re-connect, if you're not careful.

Once you have gained entry to the car, it is a simple matter to make a key.



 Code stamped here on the lock cylinder.

Honda has put the lock codes on all the locks in the car. Door locks, the trunk, and the ignition cylinder all have the codes stamped on the outside of the lock case. There is a series of numbers above the code that hold no meaning for the locksmith, but the bottom line is the code.

If the car is equipped with a remote trunk release, open the trunk. Remove the plastic snap-cover over the trunk lock and you will find the lock code stamped on the top of the lock cylinder.

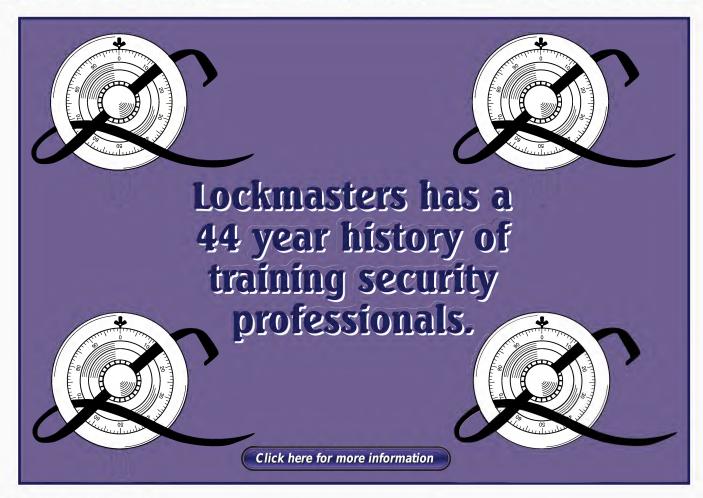


Opening in the rear of the lock handle, exposing the lock retainer.

(See photograph 1.)

The electrical wiring harness in the foreground runs to the sensor for the door ajar annunciator panel in the dash. It shows an alarm if the trunk is not completely latched.

The remote trunk release for this vehicle is mechanical, and is standard equipment on the LX and DX models. It is an option on the four door sedans. Removal of the trunk lock requires disassembly of the external trim on the trunk lid, and is not recommended.



















If the car is not equipped with a remote trunk release, the second option for finding the code is the door lock. The door lock cylinders on this vehicle are a snap to remove. After removing the door panel and moisture barrier, you will find a clear opening to the rear of the lock and handle assembly. (See photograph 2.) The retainer ring is not shown very clearly in the photograph, but it is easy to spot. Remove the retainer with a pair of needlenose pliers and the lock cylinder will fall out in your hand. Carefully disconnect the lock linkage to remove the cylinder.

The code will be found on the outside of the lock case. There are two lines of numbers and letters stamped into the lock case. The bottom line of numbers will be the code for the lock. Photograph three shows the lock and spring clip, after removal from the door. The key can be cut to code, if available, or the key can be hand filed by removing the plug from the lock case. By removing the "E" ring and cam from the rear of the lock, the plug can be removed from the lock case, without removing the cap or shutter assembly. The disadvantage to hand fitting or filing a key to the lock is that the tip cut will have to be progressed or impressioned to fit the ignition. I recommend progressing the tip cut to work the ignition. This avoids possibility of damage to the lock. These locks are not easy to impression.

The ignition lock for the new Honda Civic is much like that used on the earlier Accord and Integra models. Once turned to the "on" position, it is necessary to push in on the key to return to the "off/locked" position. It is not uncommon to find a key broken off in the ignition because of a deep cut next to the bow of the key and if the owner failed to push in on the key as it was returned to the "off/locked" position.

If a key is broken off in the ignition lock, and the lock has not been returned to the "off/locked" position, simply turn the ignition to the on position with a screwdriver and depress the



3. Lock and spring clip.



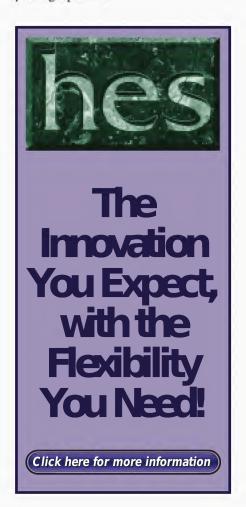
4. Cylinder retainer pin.

retainer pin on the lock housing to remove the cylinder. Photograph four shows the location of the lock retainer pin. With the lock removed from the column, the key can be easily removed from the lock, the lock must be in the "on" position to be removed from the column.

Though I read about 90% of the foreign autos that I am called to make keys for, I found this model extremely difficult to read. I also had difficulty getting the locks to impression. Cutting the key by code is the easiest and by far the fastest method to generate a key for the '88 Honda Civic.

Special thanks to Bob Allen of Rockford Honda for allowing us the use of a new Civic for these photographs.





Master Adds New Products

"Master's new rekeyable No. 25 pin tumbler padlock has a two inch wide body, shackle diameter of $\frac{3}{8}$ ", and horizontal shackle clearance of 1". Here's how to change the combination."

To help locksmiths meet the growing demands of security-conscious consumers, manufacturers like Master Lock continually work to develop new products and enhance existing offerings. During the last year, the Master and Dexter by Master Lock lines have: Created a new rekeyable padlock for industrial needs; introduced color-coded pin-tumbler padlocks; and expanded door hardware selections.

Master's new rekeyable No. 25 pintumbler padlock has a two-inch wide body, shackle diameter of \%", and horizontal shackle clearance of 1". The shackle size and added clearance make it applicable to vending machines,



The rekeyable No. 25.

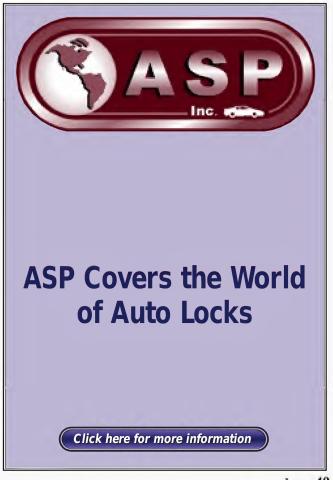
truck door gates, tool boxes and other industrial equipment.

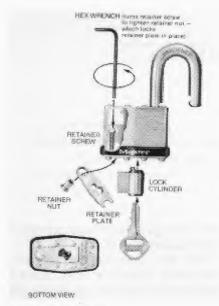
The No. 25's exclusive casehardened, high-tech steel shackle increases the resistance to cutting and sawing, compared to conventional steel shackles. In addition, rekeyable locks allow locksmiths to provide faster service, added security and cost savings on a per-lock basis.

When padlocks are replaced for security reasons—such as employee turnover or theft of keys—locksmiths can change cylinders on the spot, saving the cost of new padlocks.

To change or re-pin a rekeyable padlock cylinder, simply: 1) Unlock the

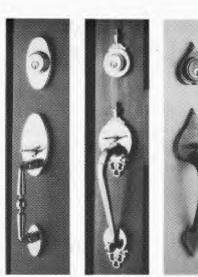




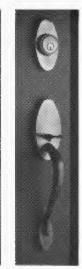


Service procedure.

padlock and withdraw the key. 2) Turn the shackle away from the opening. 3) Insert a hex wrench and engage the retainer screw. 4) Unscrew the retainer from the padlock body. 5) Slide the lock cylinder out of its chamber. 6) Insert a new or re-pinned cylinder. 7) Reassemble the lock. 8) Unlock and lock the padlock several times to insure smooth operation.



Handlesets by Dexter.





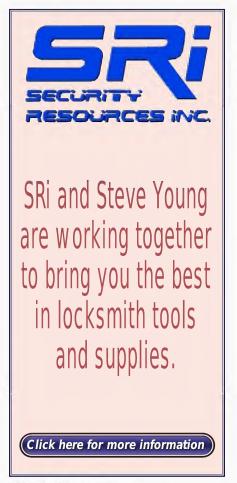


The rekeyable No. 25 can be made key compatible with an existing lock system. Keyed-alike or master-keyed systems are also available. In addition, Master recently introduced pintumbler padlocks with color-coded bumpers which provide instant visual identification. With these new padlocks, locksmiths can help industrial and institutional users design and implement an easy-to-use security system for their specific needs.

The new padlocks allow locksmiths to color code by function/department, and clearly mark hazardous situations, such as on/off switches or fuse boxes. The padlocks also help prevent employee theft of locks (special colored bumpers are conspicuous and not available on the retail market).

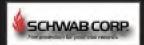
In addition to Master's standard blue bumper with white lettering, the bumpers now come in red or black with

Continued page 108

























Manipulating A Mosler

"Boom! It felt like someone hit my hand with a three pound hammer: a genuine solid contact point dead on at 89. Then I hit the right contact, but way up at ten..."

by Lee Anderson

It's always a pleasure to get a safe open-up from Alan Sammons. Besides being the busy owner of Mobile Lock & Safe Co. in the Minneapolis suburb of Robbinsdale, MN, Alan is a former safeman who gets accurate information from his customers and passes it on to me.

In this case, an insulated Mosler had been emptied and pushed into a closet during an office renovation ten years ago. Now the customer needed it again and the combination, of course, was long gone. After thanking Alan and calling the job site to say "I'm on the way," I hit the road whistling Easy Money.

Twenty minutes later I was looking at the Mosler, which our thoughtful customer already had moved to the middle of a clean, quiet, well-lit room. I was asked if I required anything in particular, then was left alone to work cross-legged on the floor; my usual position for safes of this size.

The lock was Mosler's CD 120 and I anticipated a resonably quick job with no special problems. The dial turned too stiffly, but that's a common ill with an easy cure. A few light taps on my quarter-inch punch at the edge of the dial ring soon had the ring centered on the dial. Add a dash of WD-40 and the dial turned just fine. Moments later I knew that all three wheels were picking

up as they should, and it was time to check out the contact points.

That's when my heart sank into my boots. The left point was there, sort of, but too far down. By turning the dial sharply clockwise from 90, I could hear and feel it somewhere between 85 and 87, but very faintly. Using light pressure from the pad of my middle finger, I turned the dial very slowly through that area and got only light resistance from 87 to 86; nothing good enough to work with.

I decided to work with the right contact point instead and found nothing at all. Absolutely nothing. It seemed logical to assume that the lever/fence was hung up, so I gave the door several



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hand with a three pound hammer: a genuine, solid contact point dead on at 89. Just as suddenly the right contact was present and accounted for, but way up at 10. Then, with all wheels moved up to 75, everything disappeared again.

A minute or two later I knew that the first wheel was responsible for the suddenly good reading and it was centered on 73. Isolating the second wheel was the next step. As I carried the second wheel down from 70 in increments of 2½, both contact points fluctuated in a wild exaggeration of the typical roller coaster behavior caused by Mosler's plastic, hand change wheels.

Readings varied from just under 89 at the left with 10 at the right to just under 90 at the left with 7½ at the right. At 32½ the readings improved suddenly to just under 91 at the left and just over 6 at the right. The second wheel centered at 33 and I carried the third wheel left from 35 in increments of 2½. The lever dropped with the third wheel dialed to 57½, the bolt retracted and the safe was open. I couldn't get the cover off fast enough!

The wheels looked fine and the lever was perfectly free with good pressure from the lever spring. Then I removed the drive cam. I can't honestly tell you how many different drivers Mosler produced for the CD 120; off the top of my head, I'm aware of at least three. (Someone out there knows, so how about a little help!) This one was the thick, white plastic version. They had a problem with the drive pin coming loose, so replace them as you find them.

I had seen this drive cam before, but hadn't really taken a close enough look. It's tapered from front to back like the rubber plug for the old kitchen sink, and the shoulders leading into the drop-in area are shaved quite far back, almost like a small version of the steel drive cam in a Sentry lift-out round door. This accounts for the unusual distance between the contact points.

The drive home should have been pleasant, but instead of being pleased with myself for doing a reasonably quick, professional job (at my usual fee!) I was annoyed. Let me explain what would have happened if I had drilled this safe based on the mistaken assumption that the fence was hung up. Pulling the dial and drilling into the case of a defective 120 can be like opening a big can of worms. Rejected.

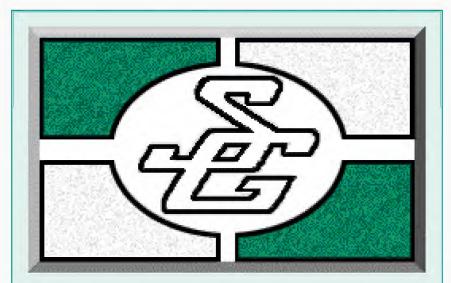
Even though I hate making visible repairs on a clean safe, I would have drilled for the handle cam. The safe would have been opened quickly, but moments after discovering the "problem," I would have kicked myself into the next county. Somehow, for several years, I had managed to overlook an important detail, and didn't feel like bragging.

Mobile Lock wasn't far out of my way, and I decided to deliver the invoice in person. While Alan dealt with a customer, I looked around his showroom and spotted—what's this?—another insulated Mosler with the same dial and handle. A quick check revealed the left contact point at 87, with the right one way up past 10! Alan

must have seen my jaw drop. He walked his big grin over to the safe and asked "What's up?" Two minutes later we were looking at—well, I'll bet you have already guessed! Another Mosler CD 120 with a plastic drive cam.

Editor's Note: Lee brings up an excellent point on manipulating a CD 120 with the plastic driver. Imagine, a 20 point spread between contact points! I should add that the plastic drivers should be replaced without hesitation. They were the source of many problems.

Illustration on next page.



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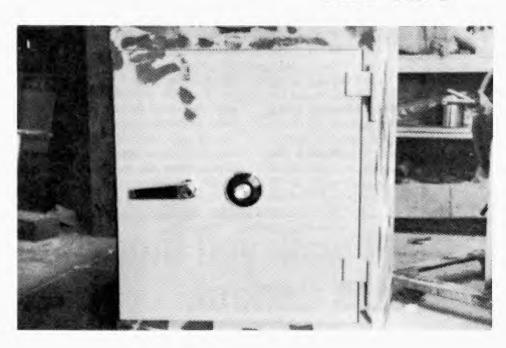






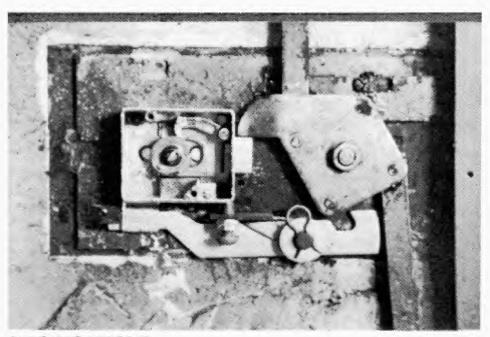


Fire Safe



SERVICE NOTES:

I believe Mosler made fire safes using a CD 120 lock mounted RH in the late 50's or early 60's. Most of these came with a ribbed black plastic handle grip. Dial center to handle center is 4¾".



SPECIFICATIONS:

Door thickness to lock: 3" Door thickness to bolt center: Type of lock: Mosler CD 120 RH

Drop-in point: 98

Drill point: 67×2", transfer to drop-in or punch cam at 31/8" LC, 11/4" up

Relocker drill point: 4" LC, 41/4" down, make a fan in the insulation, find the RL and pry up. You will

miss the hard plate

Handle rotation: Clockwise

Reprinted from The National Locksmith Guide to SAFE OPENING by Dave McOmie (Volume I).

























Masterkeying For The Professional

"Masterkeying is much more than just the generation of a series of numbers in a pre-determined pattern. Learn to apply those numbers to fit the customer's needs."



by Don O'Shall

I can remember a time not so long ago when the average locksmith could not even begin to create a professionally planned masterkey system. Today, thanks to the efforts of leading educators and writers in the trade, the locksmith who cannot lay out a masterkey system's math is a sort of dinosaur. Of course, as always, there are some who rely on a crutch to get them there. Some use other locksmiths' pre-printed charts with the numbers already filled in, and some trust their computer to get them there. While there is nothing fundamentally wrong with either of these approaches the word crutch is appropriate.

If a person were to use a crutch even though his own legs were healthy, and kept using it over a period of time, the leg that was favored by the crutch's assistance would become weak, and the muscles slack. If an occasion should arise that requires him to run, he would be unable to.

The brain, like the legs, requires excercise to remain in peak condition. Yet even a crutch can perform a vital function if it is used properly. A weak or injured leg can be given a chance to heal before being forced to pull the weight of the rest of the body. The crutch can steady a body when a limb's use has been lost and become a tool to strengthen the remaining leg and the rest of the body.

The key here is in the proper use of the tool. To use a prepared chart from a book or a computer printout is folly indeed if you are not qualified to determine the correctness and applicability of it. If you are not capable of creating a system, how can you then judge one, and put your good trade name on the line for it? Do you rely on others you believe know the way to do it? Do you believe the printed ads, or are you just gambling?

The first rule of correct use of the tool, then, is to already understand masterkeying principles, to know what a system should be, and to know its possible weaknesses or limitations as well as its strengths.

The second rule is to know how to use the tool. There's an old story about a city slicker who buys some land from a farmer. The land is good, but it is covered with trees. After a day of chopping down trees, three of them to be exact, the city slicker is ready to call it quits. His hands are blistered, and his arms hurt from swinging the axe. The farmer, not wanting to go through the bother of trying to sell the land again, and wanting to be friendly to his new neighbor, loans him a chainsaw. "This," he said, "will make it much easier for you." Reluctantly, the city slicker agrees to give it a try the next day. But at the end of the day he returns to the farmer's house to cancel the land deal. "I'll never get the land cleared," he said. "Didn't you try the chainsaw?" the farmer asked.

"Yes," the city slicker replied," and you were right. It was easier. It's much lighter and easier to swing. But after a whole day with it, I only chopped down one tree!"

Even locksmiths who have learned the proper way of creating the system math for a masterkeying system have been guilty of this one. Masterkeying is much more than just the generation of a series of numbers in a pre-determined pattern.

True, that is the basis of masterkeying, and without it, the system has little or no chance of properly performing its vital function. Just as a kite, string and key were the basic beginnings of modern electrical knowledge, trying to use them to fulfil the needs of today's complex society would not be an easy task. The knowledge must be applied to the actual needs and capabilities involved.

Actually applying those numbers you created (or had created for you) to the customer's needs is vital. In order to do this, you will need a real feel for the system from the customer's viewpoint. Lay out the system on paper, preferably in two forms. The first should be a floor layout chart. This doesn't have to be a fancy one, just an accurate one!

Doing this has saved me many errors in technique over the years. I remember one job in particular, where two doors led into the same room, from the same hallway, but on opposite sides of the room. I had planned them as keyed differently from each other until I drew the floor plan.

The next should be a system flow chart, which shows the relationship between locks and keys on a sort of family tree. The highest master key in the system (regardless of its "level" or nickname) starts at the top of the chart, and the tree widens to accept the relationships to show the relative rank of each additional level of key (and the locks related to them).

This is the standard chart as used by organizations to show the relative rank of each of their employees, with the president at the top, followed by the vice president below him, then the department heads, etc. The fundamental difference here is that on our chart, the president, vice president and department heads might all be on the same level, if as far as the locks are concerned, their areas of access are identical. Remember that you are keying the building to suit the needs of the individuals to travel within it, not keying the people.

On one job, the president of the company looked at my flow chart, and found what he considered to be a glowing error. A master key was not listed

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for someone in marketing. I replied that I thought he only needed access into the marketing office. I was told that this was correct but this individual was the head of the marketing department, so he needed a master key. When it was clear that he didn't need a master key for any areas other than the marketing office, I pencilled in a marketing master key for him on the chart. The cuts were the same as everbody else's key to the office, but his was the only "master key" for it!

Once the chart is finished, we can begin to assess the actual keys from our masterkeying system math that will best suit its needs. Doing this is relatively simple, except for a single wild card expansion. Before you assign any bittings (cut patterns) to the keys and locks, you must estimate how much future expansion is possible in the system, as well as how long the system can be realistically expected to fulfill the needs of the customer. This will be based solely on the individual job, and even though it is easy for someone like myself to spout a figure or percentage, there are no absolutes.

Once this has been determined, however, you are ready to choose the bittings. We begin this by counting how many different change key combinations each of the lowest level of master key in the customer's system will need to handle, including spares for expansion.

Let's say that the first "master key" needs to handle fourteen combinations, including those anticipated for future expansion or in-system re-keying. Your math chart has some very finite limitations as to how many combinations each "level" of masterkey can control. If you are using a system with ten possible depths and using the two increment format with either a partial progression or total position progression (simple progression), this will be in groups of four. A block master would be able to handle up to four combinations, a column master (vertical or horizontal) could handle sixteen, a page master up to 64, etc. It is easy to see, therefore, that any of the 512 column masters in the system could handle our area with a need to control fourteen.

Let us say that the next area controlled by a "master key" consists of three combinations. This would, using our example above, mean choosing a block master for it. We would continue in this manner until all of the master keys that do not control other master keys' areas are accounted for. At this point we stop counting, and look at each control group as a whole.

To continue our example, let us say that the first master needed to control 14, the second 3, the third 10, the fourth another 10, and the fifth another 7. This is a total of only 44 combinations, so we might wrongly assume that a page master could control all of them.

But when we look at the control group instead of the number of combinations involved, we see that our master keys needed to be one block master and four column masters. Since none of the column masters should control the block master in this system, and since there are only four columns on a

page, we need a whole page just for the four column masters, and then we need another block master that is not on that page. A page master could not have handled the job.

We would continue this type of evaluation for each higher level of master key, and then go back to choose the individual bittings. Just because you are using fourteen of the sixteen combinations from a column in an area of the building does not mean that they should all have a continuous pattern of cuts. Instead of pulling them from the column in order, scramble them. As you do so, look at the type of rooms or areas involved. Do any of them seem to

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be a little higher priority for security? Perhaps you could assign it a bitting that is a little farther from the rest of those chosen in the column.

We don't want consecutive numbers because they make the system too easy for an outsider to crack, given only a limited access to the keys.

We also don't want the key numbers to telegraph the system, so it is best to label them by stamping a blind code number on them that can only be decoded by comparing it with our list. The numbers should appear both random and similar. The easiest way to do this is to choose a three, four, or five

digit set of numbers to stamp on the keys, and randomly assign the numbers to the key combinations, recording them as you go along. A computer is great for this part of the job.

Once the bittings and blind code numbers are assigned, the keys can be cut, stamped and tried, the job can be completed, and you can be paid for your professional services. Then it's off into the sunset to look for another customer to help. Right? Wrong. The masterkeying job should not end when the system begins to be used. It should simply go into its next stage.

Too many well-written, well-

conceived, and well-created masterkey systems aren't doing too well. Lack of continued attention and proper maintenance is why. Systems are nurtured until they are old enough to fly, and then left on their own to struggle, maybe to survive. After the system has been created comes the time for a continuing system of key control. Proper record-keeping as to what locks and cylinders are where, and the keys that operate them, is the first step of this.

Proper service when combinations have been or may have had their security violated is another step in it. Do the combinations need to be replaced, and the cylinders involved rekeyed? This is a decision that needs to be addressed by you to the company officer(s) who authorized the initial system.

When a key is not returned, has the system been violated, and if so, to what degree? A lot of this will depend on the exact combination involved, and how it affects the rest of the system. Are life or the quality of life endangered by the lost key? Then it should be changed. What about the risks of property damage or loss? Do they justify the expense of changing the combination?

These are decisions that will not be made if you are not actively involved in the system maintenance. Company officers have enough to worry about with market trends, employee demands, costs of labor, etc. If no one reminds them of the severity of risks involved in violated cylinder combinations, they will not realize it by themselves. Instead, they will wait until a crisis has hit, and then look to re-vamp the entire system, probably in a way that will not correct the problem that originally caused the crisis and which could have been controlled.

Have keys been lost? How many of each key have been created? Which, if any, combinations have been re-keyed? Who has each level of master key? Have doors whose cylinders are used heavily been inspected for wear, and if so, how often? These are the types of questions that are asked of company officials when a crisis occurs and civil or criminal damages are sought. Can your customers answer them? For that matter can you?

This is where the computer can really shine. A good key control system, backed by specific key control policies, backed by a qualified locksmith can make a tremendous difference in whether the system is successful or not. The computer, while unable to make decisions on its own as to risks, etc.,



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can track all the lock cylinders and keys in the system, all the people authorized to possess them, when cylinders are changed, etc. In short they can maintain a full history of the masterkey system.

Once the masterkey system itself has been implemented, it is time for you to approach this stage of its growth. Set up a meeting to determine proper key control policies for the company. You will probably be pleasantly surprised to see how anxiously most of your masterkey customers will arrange this. True, it is a small initial investment on their part to buy your time and expertise for this, but the rewards to them in increased acceptability of the system, better maintenance of the system, etc., will more than pay them in return.

At this meeting, you should go prepared with sample key control policies from similar businesses, your own recommendations, and a prepared system or two for them to consider.

If you never wear a suit in your life, consider it for this meeting. Your effectiveness may be dead if your image doesn't say "professional." If you choose to wear a uniform for it, a light colored uniform shirt is preferable, and a tie, plain in color, is a must.

You should have, for their consideration, both a handposting key control record, and one or two key control packages for the computer. Phone a secretary (or equivalent) prior to the appointment to learn what type of equipment they use. Most businesses with a master key system today also have one or more computers.

Make sure that the system you bring for "show-and-tell" will run on the brand of computer they have. If you are in doubt, consider trying to arrange a private test on a secretary's computer prior to the meeting, preferably during a lunch break. Most computerized secretaries are very interested in seeing other applications for their computer. Some are not but even they will probably suggest a person for you to talk to. The advantage you have here is that they are workers, not decision-makers. They love a chance to look at a potential product and give their input to it.

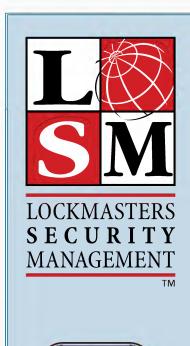
An interesting trend that I have noticed regarding the computerization of our trade is that software marketing has been either producer to locksmith or producer to end user. Yet many of the programs I have seen are more applicable to the end user, who unfortunately lacks the necessary sophistica-

tion regarding security devices to make a decision. The masterkeying locksmith is in a unique situation to market the software to the end user, and provide the guidance necessary to use it.

If you handle this entire phase of the job right, you should get a nice stipend for the layout of the key control policy, all of the maintenance (re-keying, key creation and duplication, etc.) calls, the profit from your mark-up on the computer software, etc., as well as an enhanced reputation as a security masterkeying specialist. They may not consider you to be in a profession, but they will accept you as a professional tradesman, and possibly as a paraprofessional.

Finally, you will surely get their recommendation to business associates. I used to say that word-of-mouth advertising could only work if your customer would rather talk about how great you are than how great they are. But in this phase of security, recent trends toward institutional lawsuits over security-related matters have made it among the top three subjects for discussion among a wide variety of professionals.

Continued on page 108



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Decoding Simplex Combinations

"We would circumvent the latch by shimming, and then be able to decode the existing Simplex combintion in order to open all the other doors involved."



by Steve Spiwak

The other day a locksmith called me to ask for a practical solution for an uncommon problem. His customer used Simplex keyless entry locksets in all the low traffic, high security areas in his large pharmaceutical manufacturing plant. The problem, as you might have already guessed, was that the one security person who knew the single combination to all these locks was rather hastily dismissed that morning.

The management needed to gain entrance to these rooms immediately. Recombinating these locks could come later. Since these particular Simplex latch units did not feature the optional key bypass unit, we would tackle the opening of one door in a simply physical manner.

I told my friend that I indeed had an immediate solution to his problem. We would circumvent the latch in the usual manner by careful shimming, and then be able to decode the existing Simplex combination in order to quickly open all the other doors in question. We could then come back at the end of the day in order to reset all the combinations to a new sequence of numbers. When the combination is known it is a simple matter to reset the existing combination. This is in fact one of the most enticing features of this unique lock.

Simply remove the Allen head screw, enter the existing combination, and release the combination by inserting the Allen wrench into the appropriate hole to depress the bar completely. Now the new combination can be set.

The Simplex lock itself is a cleverly constructed, mechanically operated keyless combination lock which is connected to its own locking mechanism or switch. When the Simplex is connected to a switch, this device has the capability to operate a variety of different electro-mechanical devices (i.e. electric strikes, electric locks, etc.).

However, our problem was not that simple! In order to demonstrate the technique that we used on the job let us take a sample Simplex lock in order to recreate the decoding procedure.

Begin by removing the lock from the now opened door (see photograph 1). Now remove the two screws and the closed wishbone washers which secure the lock chamber to the main lock body (see photograph 2). Next remove the gear plate assembly and then remove the cover from the combination unit. The next step is to remove the clutch assembly (See photograph 3.) The push-button mechanism is disarmingly



Front view of Simplex deadlatch on a



Removing screws from main lock body.

simple and the inner mechanism is now revealed. (See photographs 4 and 5.)

Begin the actual decoding procedure by turning the knob to clear any arbitrarily entered numbers. (See photograph 6.) Remove the lock chamber cover and note the locations of the gate on each and every wheel. (See photograph 7.) If a gate is already in line with a fence after clearing, (note: numbers 1 and 2 from the top vertically correspond to push buttons 1 and 5) then those numbers are not involved in activating the combination. The gates that appear just to the side of the fence were used last. (Note: number 4 from the top vertically corresponds to push button number 3.) The numbers that were used first are at best barely visible (Note: numbers 3 and 5 from the top vertically correspond to push buttons 2



3. Clutch assembly.



Reverse side of push button mechanism.



5. Inner mechanism removed from the

























The Padlock That Ate West Virginia!

"Larry Moody built something his customers will definitely notice as they come into his shop, a giant working padlock. It weighs over 30 pounds!"

Larry Moody, a locksmith from West Virginia, wanted to do something unusual. So he made something that his customers will definitely notice as they come into his shop, a giant working padlock. The padlock and the set of two keys weighs 31½ pounds. It took Moody about 100 hours of work during his spare time to complete this project.

The lock itself is six inches wide, three inches thick and 11¼ inches high. The shackle is 1-1/16" in diameter. The hasp is 7¼" wide, 20¼" long and is made of quarter-inch plate steel.

The two keys that come with the lock are made of brass and are 7\%" long, 3"



Cutting and filing...

wide and ¼" thick. This giant padlock has all the working parts of a regular size lock.

Moody has had some machine shop experience which helped in this project



...the giant key.

since he started out with just a steel block and a steel bar.

So if you are ever in the Lewis County, West Virginia area, look up Larry Moody and his giant padlock!



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The padlock is shown here with all its components.



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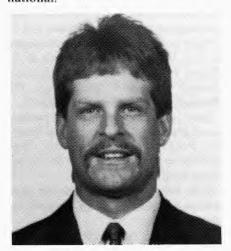


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Business Briefs

Belwith Promotes Pegel To Sales/Marketing Post

After obtaining his B.S. in Business Administration/Marketing at Grand Valley State University, Michigan, Don Pegel joined Belwith in its Michigan office where he spent the last 1½ years in Customer Service. Recently, Don has been promoted to the new position of Sales and Marketing Administrator for Belwith International.



Don and his wife, Cheri, are relocating to the Los Angeles area where Don will report to Director of Marketing, Mark Pelley, at the company's expanded headquarters in City of Industry.

Glynn-Johnson Becomes Part of Von Duprin

Brian Jellison, president of Von Duprin recently announced that Glynn-Johnson, a Chicago-based specialty hardware division of Citation Walther Corporation, a part of Varity Corporation, of Toronto, will become a separate management unit of Von Duprin.

Terms of the transaction were not disclosed. Jellison stated that all manufacturing, marketing, and sales functions will continue under the direction of existing Glynn-Johnson staff and that existing sales representatives will be maintained.

Glynn-Johnson is primarily a manufacturer of door control hardware.

Schlage Names Burkhardt Commercial Product Mgr.

Martin Burkhardt, a former Schlage Lock Company Field Sales Manager, has been promoted to Commercial Product Manager of Schlage Lock Company.

Martin will report directly to Peter Arezzini, commercial marketing manager. He will be responsible for many of the basic functional areas in marketing as they relate to the commercial channels of distribution and the markets they serve.

He will work closely with business development, research and development, and engineering departments along field sales to develop and implement new product introductions.

Martin is an active member in the Door Hardware Institute (DHI) and has served on the Code Committee, Denver Chapter.

Code-Alarm Names Foster To Board

The directors of Code-Alarm, Inc. today elected financial expert Alan Foster to its Board of Directors. Foster joins the Code-Alarm organization bringing with him broad experience through posts with Sylvania Electric Products, American Motors, and the faculty of the University of Michigan School of Business Administration.



Since 1978, he has been a consultant in finance to governments and corporate and financial institutions. He is also an underwriting member of Lloyd's of London and previously acted as a consultant to one of the large

Lloyd's brokers.

He is a consultant to two commodity firms; one, a founding member of the Chicago Mercantile Exchange; the second, a founding member of the London International Financial Futures Exchange. He is adjunct lecturer in finance at the University of Michigan's School of Business.

He is a graduate of Boston College and the Harvard Business School, former President of the Detroit Chapter of the Financial Executives Institute, the author of "Practical Business Management," "Cash Forecasting and Short-Term Investment," and "Treasurers' Handbook,"

Connors New President Of Weiser Consolidated

Weiser Corporation announces the appointment of Jim Connors as president, replacing Phil Pryne who held that position for the past eight years. Pryne moves up to become group president of Weiser's parent company, Masco Corporation.



Connors will assume responsibility for the United States, Canada and all overseas operations. Connors will also serve as Masco Group Vice President of the Hardware Products Division.

Prior to joining Weiser Consolidated, Connors was president of Sunbeam Appliance Company, a division of Allegheny International, Inc., and was located in Chicago, IL. He also served as reporting head of Sunbeam Canada Ltd., and Sunbeam Far East Limited. Before joining Sunbeam, he was president of the Lowrey Division of Norlin Corporation.

Dorma Names Devine Dir. of Marketing/Sales

Ian Devine has been named Director of Sales and Marketing-North America, for Dorma Door Controls Inc., according to Nelson Burnett, president, Dorma.

Devine will also continue to serve in his present position as president of Dorma Door Controls Ltd. (DDCL), Mississauga, Canada.



lan Devine brings years of fieldproven experience to Dorma's U.S. industry base. He will be responsible for directing Dorma's North American sales and marketing operation, in addition to supervising Dorma's distribution and customer service operations.

Devine joined Dorma in 1984 as president of Dorma Door Controls Ltd. Previously he spent 16 years with Ingersoll-Rand Door Hardware, Mississauga, Ontario. His positions included Manager of Marketing and Sales, President of LCN Closers, Canada, and General Manager of LCN Closers, Canada.

S&G Announces Byington As Executive V.P.

Effective March 16, 1988, Walter M. Byington has become the Executive Vice President of Sargent & Greenleaf, Inc.

Mr. Byington has been a member of the top management team at S&G since joining the company in 1981, and most recently has been Senior Vice President of Operations. He is a native of Danville, Kentucky, now living in Lexington.

The announcement was made by James J. Callahan, President of Sargent & Greenleaf, Inc.

Medeco Forms Division For Customer Assurance

Medeco Security Locks, Inc., announces the formation of a Customer Assurance Division. This new department has been formed to satisfy customer requests, complaints and inquiries in the quickest and most efficient way possible.

With the formation of this division, Martin Matheny, formerly Hardware Development Manager, has been named Customer Assurance Manager. In addition, Judy LaPrade has been promoted to supervisor, distributor sales and service; Mottsy Moses has been promoted to supervisor, OEM sales and service; and Phyllis Meadows has been named supervisor of order entry, and Canadian, government and export sales and service.

Product questions, delivery schedules and order inquiries are handled on an immediate basis by Medeco's trained customer assurance staff in an effort to create the most professional customer assurance department in the industry.

Alarm Supply Co., Inc. Appoints Gabay As V.P.

Bill Nix, president of Alarm Supply Co., Inc, has just announced the appointment of Stan Gabay as Vice President of Marketing. Mr. Gabay joined Alarm Supply in 1979 and has worked closely in all areas of marketing and communications, including field work with dealers and suppliers. New responsibilities will include total marketing coordination and implementation, all purchasing, pricing and supply center merchandising for the 24 Alarm Supply distribution branches around the United States.

Mr. Gabay has been active in the alarm industry since 1967. During the past two decades he has developed



extensive experience training alarm installers, handling a variety of advertising and sales promotion assignments, as well as purchasing. Stan served as the Director of International Marketing for a leading alarm manufacturer and was responsible for establishing a worldwide network of distributors.

Ive's Announces Latest Promotions

H.B. Ives is pleased to announce the promotion of Richard Elliott to Vice President of Operations. Dick has been with Ives for three years as Vice President of Manufacturing.

In addition to fourteen years of managerial expertise in manufacturing and engineering, Dick possesses a B.S. Degree in Engineering from Annapolis, U.S. Naval Academy, and an M.S. Degree in Engineering from Massachusetts Institute of Technology. He obtained his M.B.A. from Stanford.

Dick is a member of several professional associations including the American Production and Inventory Control Society and the Society of Manufacturing Engineers.

H.B. Ives, also announces the promotion of Rolin Sugg to Director of Manufacturing.

Rolin joined Ives in 1985 as Production Manager and became Director of Engineering in 1987. Rolin will be responsible for all the engineering and production functions in the Ives New Haven plant and brings to his new position, experience in production, quality control and engineering. Rolin is a graduate of the Rochester Institute of Technology.

Senior Management Changes Announced At Diebold

The board of directors of Diebold, Incorporated today announced they will elect Diebold President and Chief Executive Officer Robert Mahoney to the position of chairman of the board; he will continue as chief executive officer. They will also elect Senior Vice President Robert Barone president and chief operating officer; Mr. Barone was nominated to serve on the board of directors.

















Keyblanks: Original Ilco HPC H20 1003M N/A

	7000		7050		7100		7150		7200
	02153 53403	51	15435 04253	01	35303 25243	51	23523 01203	01	15415 02123
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04	35415 03013		35215 52103		43245 10313		34025 54143		42025 24303
06	15315	56	15235	06	31535	56	03025	06	31305
	25435 45013		02535 21545		54103 25025		42413 20525		01535 15303
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	03153		01545		35153		50315		35353
	21305		25403		23435		05243		10525
22	10403 50415		42515 32353		13503 54535		15325 43103		21413 04205
		73	51053	23	02423	73	31045	23	25143
24 25	35035 20503		10515 01253		43053 40235		21423 51535		54015 41523
26	43145	76	30535	26	52313	76	15453	26	15105
27 28	13203 51453		41503 21205	27 28	24103 12023		30515 12043		34203 12153
	05413		54215		02325		43205		01425
30	31215 23503	80	14523		34525	80	20153		40303
			04303 41245		42143 54253		05045 50143		25015 54125
			30305		25325	83	32035	33	15313
34 35	51203 01503		20343 53423	34 35	15353 03105	84 85	21353 05035	34	01215 52403
36	24325	86	12145	36	20423	86	20303	36	34345
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	20205 34303		53235 03205		14015 25103		05353 20435		35023 45245
43	54505	93	15035	43	54353	93	43523	43	02403
	42303 14125		32023 23245		02035 40525		12515 31253		54325 10423
46	01513	96	42043	46	31435	96	04515	46	21515
	24013 32153		52515 01353		15153 25415		54303		30413
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Keyblanks:

Original H20 Ilco 1003M HPC N/A

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75 03123	25 15425	75 34125	25 15245	75 23153
76 51545	26 43513	76 54243	26 42523	76 34515
77 34103	27 35325	77 02125	27 25135	77 15013
78 40325	28 50153	78 14513	28 54513	78 54525
79 15305	29 04525	79 23105	29 04325	79 43453
80 23403	30 25353	80 32053	30 32423	80 21405
81 54205	31 41215	81 45135	31 41535	81 15023
82 02353	32 14535	82 51253	32 14313	82 02515
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85 15025	35 24503	85 35345	35 51015	85 42403
86 23203	36 05425	86 15403	36 41323	86 25235
87 04145	37 31513	87 43153	37 32415	87 14305
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94 50503	44 12315	94 04315	44 32453	94 34213
95 35435	45 45253	95 21503	45 15145	95 54203
96 05103	46 51425	96 51315	46 24523	96 45035
97 14515	47 04143	97 15253	47 42415	97 01343
98 45353	48 20405	98 42535	48 35423	98 23535
99 50415	49 35213	99 32303	49 50545	99 54213

















Keyblanks:

Original H20 Ilco 1003M HPC N/A

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03 23015	53 25345	03 45125	53 20453	03 20415
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35 21415	85 03523	35 12125	85 25423	35 12535
36 30143	86 23145	36 40423	86 35045	36 25313
37 14145	87 14213	37 53535	87 51413	37 40135
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43 12525	93 43403	43 41343	93 42503	43 45313
44 45243	94 10143	44 24045	94 32325	44 52535
45 50345	95 35205	45 01543	95 13053	45 31523
46 20213	96 54013	46 35245	96 05315	46 04215
47 34215	97 03245	47 12513	97 25343	47 14123
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49 10425	99 24135	49 21425	99 51323	49 42153

















Keyblanks:

Original H20 Ilco 1003M HPC N/A

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51 05303	01 01315	51 13025	01 53203	51 53103
52 34325	02 52123	52 23405	02 02015	52 30505
53 13143	03 13403	53 40453	03 31503	53 41023
54 21535	04 31315	54 52513	04 13525	54 21315
55 41413	05 41353	55 01505	05 25023	55 05353
56 52525	06 23143	56 32515	06 42105	56 13245
57 02403	07 04105	57 13143	07 52353	57 50213
58 31205	08 12523	58 43505	08 03425	58 32545
59 13143	09 52153	59 25153	09 12303	59 40523
60 25125	10 31545	60 50105	10 34104	60 24105
61 43253	11 45103	61 02043	11 20203	61 10523
62 51535	12 02525	62 34205	12 41235	62 03535
63 30513	13 23423	63 13125	13 50403	63 31403
64 14105	14 12105	64 20543	14 32105	64 52025
65 24253	15 50543	65 45205	15 13153	65 40503
66 43415	16 30205	66 52053	16 04245	66 23515
67 51513	17 40435	67 03215	17 25013	67 10503
68 34145	18 24023	68 32343	18 0	68 31245
69 05203	19 01205	69 10435	19 53243	69 03023
70 10415	20 12015	70 20253	20 10145	70 52125
71 45143	21 50523	71 41505	21 30543	71 40213
72 23125	22 31515	72 52013	22 04015	72 20535
73 51403	23 40143	73 32425	23 25053	73 30423
74 32405	24 21505	74 05043	24 42405	74 10325
75 04203	25 02053	75 13215	25 53053	75 05405
76 45305	26 52505	76 20523	26 32505	76 52143
77 10513	27 10303	77 41525	27 03203	77 40515
78 52145	28 31543	78 50253	28 12035	78 31303
79 21513	29 41205	79 30415	29 20103	79 20215
80 31015	30 21203	80 04103	30 41053	80 52503
81 45303	31 02025	81 25035	31 52105	81 13535
82 01405	32 13013	82 13103	32 34043	82 04025
83 13043	33 31353	83 42135	33 10215	83 40403
84 24515	34 41515	84 50413	34 23035	84 32305
85 51543	35 25043	85 30425	35 42103	85 50203
86 31505	36 52423	86 03053	36 51515	86 20425
87 45123	37 04503	87 23045	37 31423	87 30313
88 01515	38 34305	88 12053	38 03505	88 13505
89 14013	39 10315	89 45315	39 13023	89 40253
90 52325 91 25213 92 31525 93 45235 94 24243 95 01325 96 51313 97 13135 98 31325 99 43535	40 42525 41 23243 42 51525 43 05253 44 34135 45 12503 46 43035 47 23103 48 52315 49 05023	90 51503 91 30315 92 02305 93 23023 94 12025 95 41403 96 52405 97 30453 98 01305 99 23253	40 21245 41 40513 42 52015 43 32403 44 03515 45 10305 46 51043 47 25205 48 40543 49 04043	90 02425 91 50513 92 24525 93 35013 94 13105 95 52523 96 05215 97 40353 98 32525 99 52413 00 52245

Shop Talk

Helpful Questions and Answers

Written by all of the following authors: Shirl Schamp, Don O'Shall, Robert Sieveking, Steve Spiwak, Jack Roberts, and Dave McOmie.

Send your locksmith questions, along with a self-addressed stamped envelope to: Shop Talk, The National Locksmith, 698 Bonded Pkwy., Streamwood, IL 60107.

Q: I was recently called on to service a 1986 Oldsmobile Ciera. The keys were locked in the trunk. I went first to the glove box, which takes the same key as the door and trunk. Getting the lock out of the glove box is simple, but decoding it is more difficult. Please advise me on how to make a trunk key for this car. I could not pick the lock either direction far enough to remove the cylinder.

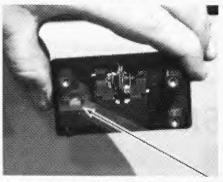
Economy Lock & Key Florida

A: The glove box lock you refer to is a new model that we've run into on the newer Buicks and Oldsmobiles in the Cutlass class (also Ciera and Calais). This new design requires that the lock be picked to the locked position, then picked again, farther in the locking direction to be removed. The lock plug uses a retainer that is the same as previous locks, but its function has changed. The previous locks used the retainer to prevent the lock from being removed through the front of the lock case by blocking on a ridge at the front of the lock. Depressing the old retainer, allowed the lock to be removed directly. The new lock uses the same retainer to prevent the plug from rotating far enough to clear the cylinder retainer at the rear of the lock.

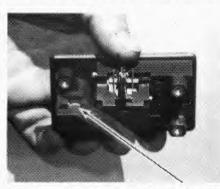
Note that the keyway is vertical in the unlocked condition. Photograph one shows the lock removed from the glove box. You can see the square access hole in the end of the lock body which allows you to poke the retainer down while picking the lock further to



1. Cylinder retainer shown here.



2. Rear of the cylinder in locked position.



Rear of the cylinder picked 30 degrees right of the locked position.

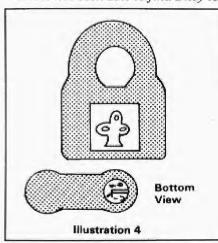
the right, releasing the plug. Photograph two shows the rear of the lock plug after it has been picked to the locked position. You can see the cutout in the back of the plug has not rotated far enough to clear the plastic ear on the lock body which prevents the plug from being removed. In photograph three the retainer has been depressed and the plug rotated another 30° or so.

It now clears the plug retainer. The plug can be removed in this position. With the plug out of the lock, you can read the wafers and progress the first two cuts, to make a working key for the doors and trunk. The plug is retained in the same fashion as the plug of an Almont rekeyable padlock.

This lock need not be removed from the glove box to remove the cylinder. Pick it to the locked position. Pick it again in the same direction, and maintain the turning tension. Use a hook pick in the keyway to pull the retainer in. This will allow the plug to rotate another 30°. Remove the plug. This trick may take a little practice, but it greatly simplifies removing this cylinder. The idea of pulling in the plug retainer with a pick will also work with almost all GM glove box locks that I've seen. It eliminates hunting for the poke hole or picking the lock if the glove box is locked.

Q: Illustration four features a padlock that was brought to me to make keys for. It's a Yale lock and the code number on the bottom appears to be U 1 3 4 6. The number 1346 can be seen plainly. The U is faded and could be an E or F. The left side of the keyway is filled in to make it smooth.

I have not been able to find a key to



June 101

fit, and I cannot find the code for this lock.

This lock is a keepsake, so any help will be greatly appreciated.

Jerry Garvey Ohio

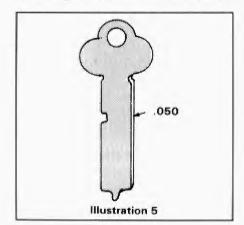
A: Jerry, your lock appears to be a Yale 803 and uses the #10 code, more commonly referred to as the "J" series. If my guess is correct you can use a Yale 11/2 blank or Ilco 1239 and cut the key from shoulder to tip. This is a four pin lock and you can use the small Yale gauges numbered 1-7. If you have a code machine use Yale small pin spacing and depths. The "U" is a "U," but some of the other Yale locks in this four pin series do not have a prefix. The 803 almost always has the "U." The cuts for 1346 and 3515 and the spacing is: .146, .286, .426, .566. Depths of cuts are, 1=.250, 3=.214, 5=.178. Go at it Jerry, and don't let that flat 11/2 blank throw you.

Q: In the August 1987 issue of The National Locksmith Dave Mc Omie discussed the Halls safe in fascinating

detail. It was all the more interesting for me because one of my customers has such a safe (the L-handled version) with a worn and sloppy combination lock. They tell me that many mornings it will take them up to six tries to open the beast.

After a quick examination of the lock I decided my best course of action would be to install an entirely new combination lock in the safe.

Now for the questions; what currently available lock would you recommend and where can I get such a unit? Next, the inner doors are secured by a large lever tumbler lock and I



would like to obtain key blanks to fit this lock. (See illustration 5.)

As you may have surmised by now, safes are not my area of expertise but out here in the boondocks we do what he have to do to earn a living and the expert/specialists usually starve or move away.

I will appreciate any help you can offer.

Ward Sharrer California

A: To answer your question, yes, a conversion can be done, but it is time consuming. You have to dig out the fire clay, cut an access hole through the time cover and install a new lock (I have used a 6730 mounted VD). In my experience, this has only been necessary when the existing lock was damaged beyond repair—usually by bunglers, I mean burglars.

It is a safe bet that the lock in your customer's safe can be made to work. You need to do a little analyzing. What exactly is the problem? Are the wheels dragging? Do they continue to rotate (free-wheel) even after you have stopped turning the dial. Are they wobbling on the wheel post?



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If the wheels are "free-wheeling," then it is a simple matter of slowing down the dialing process. If the wheels are dragging, check the pick-up screws for a burr or rough edge. You may be able to hit it lightly with a file and cure the problem.

Wheel post problems are the hardest to take care of. If you find that the wheels just won't stay perfectly lined up at the drop-in point, (and with a badly worn post this can be a real problem) there is a way to overcome it.

Simply widen the wheel gates a little. This is one of those taboos that no one ever talks about or admits to doing. I have done it twice on Halls wheels in situations where they just would not stay lined up, and where the problem was not wheel drag or free wheeling wheels. It is a last resort method, because it does lessen slightly the security of the safe. I have also done this several times for elderly people who often have great difficulty in dialing the numbers precisely. I want to stress however, that this is to done only as a last resort, when all else has failed. 04

Q: I need information on a 230 Suzuki 4 wheel. The number stamped on the lock is 507. I have a good assortment of Suzuki key blanks but none of them go in the lock.

I do not want to ruin the lock. Does the plug come out of the shell? If I can get the lock apart and have the right blank, I could get a working key.

Leonard Granger Minnesota

A: The 507 on the face of the lock could possibly be the code and then again it could be totally unrelated. I definitely would check my code book. After checking I find the Suzuki codes don't go that high. The next and obvious thing would be to re-examine the lock to insure I have a Suzuki lock in my hand, especially if it was handed to me rather then taken from the bike. Sometimes what the customer tells you is wrong.

Assuming it truly is a Suzuki lock I would find which key fits the lock. Suzuki blanks that I have in stock are: S74H, S74K, S74J, X11, X18, X39, X63, X 67, X72, X73, X74, X75, X76, X77, and X87. If you don't have the proper blank and must substitute

something else remember, the stops should make proper contact, the blade should insert all the way, and the width of the blade should fill the keyway. If the blade width is lacking you could have passed the number one level before you even begin.

Now that we have a blank and we know the number we thought was the code is not, we must make a key. Is it a wafer lock. Is it double sided convience key? (No Suzuki to my knowledge uses a true double sided lock, meaning wafers don't come from both sides.) Assuming it is late model and uses a double sided convience, I would first try raking the cylinder out of the plug. This requires you to insert a hook into the keyway all the way to the rear and depress the retainer. While doing this insert an extractor and pull out. Once the cylinder begins to come out then simply rake the wafers to keep them from becoming trapped as you pull out. Keep the hook or rake in the cylinder until you get it to the bench to avoid losing any wafers.

Another way to make the key is to impression it. Remember it's a wafer lock (thin wafers easy to bend). If your method of impressioning is to insert a

Continued on next page



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Continued from previous page

blank, apply turning pressure, rap the key up and down, don't do it. You'll probably ruin the lock by bending the wafers. Use a moderate hand pressure only. If you find this difficult, sharpen the edge of your blank. Make sure you know which side the wafers are coming in from and only concern yourself with that side of your key. Insert it the same way each time, working it as if it was a single sided lock. You can always transfer your cuts to the other side later.

Last but not least, you read the lock and guess for the cuts. The way you do this is use a paper clip and a flash light. With the paper clip depress all the wafers, and start removing it allowing one wafer to be release at a time. Watch them as they pop back into position, Those that return the farthest (showing the most meat in the keyway) are the deepest. Those that barely return are the shallowest. Depending on the lock, you only have three or four possible depths to contend with. Remember, the deepest cut in a code series usually reaches the first land and the shallowest usually is a no cut (full width of the blade). If it only requires three possible depths then the remaining one is half way between a no cut and the first land. If it requires four depths then #2 is 1/3 the distance to the first land and #3 depth is 2/3 the distance to the first land. If at first it doesn't work, widen your cuts. There are lots of tolerance and this often works well.

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Spiwak

Continued from page 82



Decoding process of clearing numbers.



Noting the location of each gate on each wheel.

The correct combination is therefore: Step 1: Push the buttons numbered 2 and 4 simultaneously. Step 2: Push the button numbered 3. Step 3: Turn the knob to open the lock.

Now that the correct combination is known, the new combination can be entered. All the doors in the factory were soon opened. We returned later that evening to set the new combinations.

Letters

Continued from page 6

these important technical journals. In addition, we will be in a position to attract overseas advertisers and technical input from overseas lock manufacturers and locksmiths.

Our ability to translate the technical information into French, Italian, Spanish and German, will increase our penetration in many overseas countries while enhancing our stature in certain parts of North America.

Furthermore our ability to translate in-house the technical books and servicing manuals to Chinese, Japanese and Russian, should open for the Unican group, enormous possibilities for commercial development in these countries where locksmithing is still an ironmongery rather than a technically developed trade.

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Technitips

Continued from page 14

spring steel to depress the sidebar.

Insert a small screwdriver into the lock and apply turning pressure. Remove the spring steel while maintaining turning pressure on the lock to open the trunk. Remove the lock to replace the shutter assembly and install a new cap. This method does not injure the lock or decrease its security.

I think this is the most professional method of opening this type of lock under these circumstances, and well worth the fee you would charge. It takes about twenty minutes, with a little practice.

Practice this method before you go out on the job.

Paul Krohn Georgia

Editor's Note: I have used this method with good results, when the trunk lock is keyed differently from the other locks on the car. You will probably find that most cars equipped with the sidebar glove box locks will also have an electric trunk release. Make an ignition key to turn the ignition to the on position, then wedge the upper left hand corner of the glove box slightly to see the trunk release button. Use an "L" wire tool (wing window tool, used to open autos with fly or wing windows) to depress the trunk release button. Be careful not to scratch the dash around the glove box door. The keys are locked in the trunk, right?

Company Profiles

Continued from page 37

tance as a leader in the specialized field of electric locking hardware. Specific product introductions include the 3900 electromagnetic lock in 1977, the patented narrow design 1316 and 1316S mortise deadbolt series locks in 1978, the patented pending 7500 series universal keyswitch in 1982, and the patented 3940 Intel electromagnetic lock in 1987.

Security Engineering strives to manufacture products that make sense, satisfy customers needs, and are competitively priced and in stock for immediate delivery. Another aspect that is important in any company, but even more so with electric locking hardware, is service.

The customer service department, consisting of 5 specialists, has over 40 years collective experience in the electric locking field. Whether it's a simple



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single door application or the space center, there is a staff of service and engineering personnel to answer those important questions. The electric locking market is growing at an incredible pace with no end in sight; the aggressive locksmith should capitalize on this phenomenon and reap the profitable benefits with an experienced company.

Circle 331 on Rapid Reply

Silca

The story of Silca dates all the way back to 1770 when Prospero Bianchi, a master blacksmith, was producing forged iron keys in his shop at Cibiana di Cadore. Even today, the forge in that remote Italian village is maintained and certain types of keys are still produced there by hand.

But Silca at the present time is pushing technology to the limits. The company is the largest manufacturer of key blanks and key machines in Europe. Each day the factory, located outside of Venice, Italy, produces over one million high quality key blanks. In the new 180,000 square foot factory, over 25 million key blanks are in stock on any given day. Over 26,000 different keys are manufactured and maintained in stock for shipment to customers worldwide.



Because the key blank market is constantly changing, Silca is continually adding new blanks to their line. As soon as it is known that a new car or lock is being brought to market, Silca prepares to manufacture the blank. Frequently, the key blank is available to the locksmith even before the new car or lock is on the market. Approximately two new key blanks are introduced by the company every day.

However, key blanks are not the only product which Silea manufactures. The company also makes a wide range of key machines. As soon as any new blank becomes available, technical experts study methods of duplicating that key. If new adapters are required, they will be made. In the unusual event

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that a blank cannot be made on an existing machine, a new machine will be designed and manufactured.

In order to efficiently serve the North American market, Silca has an exclusive marketing arrangement with HPC, Inc. HPC stocks the full complement of blanks needed to serve the marketplace. New key numbers are shipped to the United States by air to assure immediate service to the locksmith.

Also in stock at HPC is a wide variety of key machines made by Silca. These machines have gained a wide following in the United States. Among these machines are the following: the One-MAS is a heavy duty, semiautomatic duplicator with 4-way rotating jaws to hold any key. The Poker is an automatic key machine which cuts standard domestic as well as foreign and domestic automobile keys. There is also the Club machine, offering stateof-the-art high security key duplication. (Silca also manufacturers a full slate of high security key blanks to fit most manufacturers.) The Crown key cutting machine is for tubular keys with frontal cuts.

Silca also has an extensive organization in place in the United Kingdom, with headquarters in London. They also have factories in Germany and France where they produce key blanks to serve those markets. The company prides itself on crafting a high quality product, taking numerous extra steps in manufacturing to provide the locksmith with fine key blanks and machines.

Circle 332 on Rapid Reply

Master Lock

Continued from page 50

white lettering, and green with yellow lettering. The color option is available on the 1½", 1¾", or 2" wide pintumbler padlocks, in almost any system combination. Users simply indicate the preferred color on a regular order.

The Dexter by Master Lock line has also been expanding and upgrading its door hardware for residential and light commercial applications. In addition to the ever popular deadbolts, Dexter by Master Lock now offers a wide range of upscale handle sets and accessories. Dexter Designer Series entrance handles are constructed of all brass and steel, and offer a full range of styles to suit contemporary, transitional or traditional tastes. The Dexter Duralock cylindrical knob and lever sets are con-

structed of all brass and steel and feature five or six pin-tumbler cylinders. Dexlock tubular knob and leversets are constructed of cold rolled steel and feature solid brass trim. All Dexter locksets are American-made and backed by a lifetime warranty.

In addition, the Dexter DC keyway lets locksmiths provide locksets that are key-compatible with Schlage, Baldwin and other existing C-keyway installations. DC keyways can be specified for Duralock grade-2 cylindrical locksets, entrance handles, 4100, 4200 and 4300-series deadbolts, and lifebolts, and mortise and rim cylinders.

Staying on top of the latest developments in the hardware industry can help locksmiths provide superior customer service, which leads to repeat business and increased sales in the long run.

Controlled Masterkeying

Continued from page 81

The real beauty of this is that anyone who has improved their own security outlook, such as by implementing your recommendations, and setting up your key control system, is a real winner at the luncheon table. For that reason, they win by talking about how great you are, and how the way you set them up for system protection is unique—not at all what they had expected.

If you are missing out on this phase of the masterkeying job, you are doing your cusomter a disservice, and not doing as many favors as you could for yourself and your bankbook.